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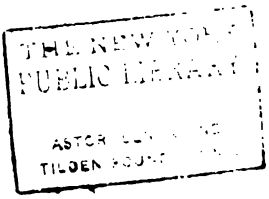
PUBLIC

SIXTEENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF

NEW YORK.

TRANSMITTED TO THE LEGISLATURE FEBRUARY 17, 1896.

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IN ASSEMBLY,

FEBRUARY 17, 1896.

SIXTEENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH.

STATE OF NEW YORK:

EXECUTIVE CHAMBER,
ALBANY, *February* 17, 1896.

To the Legislature:

I have the honor to transmit herewith the sixteenth annual report of the State Board of Health, with appended maps and papers, the same being for the year 1895.

LEVI P. MORTON.

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STATE BOARD OF HEALTH OF NEW YORK.

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DANIEL LEWIS, M. D., PRESIDENT, - - - - - *New York city.*

BAXTER T. SMELZER, M. D., SECRETARY, - - - - - *Albany.*

THOMAS A. STUART, ASSISTANT SECRETARY, - - - - *Albany.*

STATE SUPERINTENDENT OF REGISTRATION AND VITAL STATISTICS.

BAXTER T. SMELZER, M. D., - - *As Secretary of the Board.*

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REPORT

To His Excellency, Hon. LEVI P. MORTON, *Governor of the State of New York:*

The sixteenth annual report of the State Board of Health is herewith respectfully submitted, as required by law.

Since the first constitution of the State Board of Health, under the law passed May 18, 1880, the population of the State has increased from 5,200,100 to nearly 7,000,000, and the number of cities from 24 in 1880 to 37 in 1895, and the number of incorporated villages has risen to 354.

The past decade has been marked by noted advancement in sanitary science, the result being a decided public demand for abundant supplies of pure water, the most approved systems of drainage and disposal of garbage, the control of preventable diseases, and a systematic enforcement of every requisite for the maintenance of the health and comfort of the people. Thus, by public demands and necessities, the duties devolved upon the State Board of Health have been steadily increased, year by year, until they are as continuous and exacting as those pertaining to any department of the public service.

There have been twelve meetings of the full board during the year, and numerous meetings of the different committees for the purpose of investigation and report upon the various questions referred to them by the board.

THE ABATEMENT OF NUISANCES.

The most important investigation during the year was concern ing an alleged nuisance existing in the town of Ckeektowaga which was ordered by your excellency in July last.

This nuisance consisted of a number of extensive rendering es tablishments and fertilizer factories in the suburbs of the city o Buffalo, concerning which a large number of citizens entered complaint and urged the adoption of some means of abating th nuisance. At a meeting of the board a special committee was ap pointed, which was directed to proceed to Buffalo and — all partie having been notified of the meeting of said committee — full examine the cause of the complaint and recommend a plan fo remedying the evils complained of.

Several days were devoted to this examination. The evidenc secured from the petitioners and others, as well as a personal in spection, convinced the committee that these works were bein conducted with inadequate facilities for preventing the dissem nation of noxious gases and the general contamination of th atmosphere over a large area.

The committee (in their report which is appended) specifically called attention to many changes in the conduct of these establis ments demanded in the interest of the health of the communit and recommended to your excellency the appointment of an in spector, whose salary should be paid by the owners of these offe sive works, to insure the proper observance of the requiremen of this board.

In compliance with your order, dated November 12, 1895, a proving the recommendation of the board, an inspector has be appointed, who entered upon his duties January 1st of this yea and the rules governing his action regarding these nuisanc

have been prepared by the committee to whom such matters are regularly referred.

In May, of last year, a complaint was received from numerous citizens of White Plains concerning a bone-boiling and fertilizer manufactory, in the town of Greenburgh, situated about three miles west of the village, on the road to Dobbs Ferry. The chairman of the committee on effluvium nuisances inspected the premises, and found a small frame building in which was a bone-boiling apparatus of the crudest description, no apparent effort being made to prevent the infection of the atmosphere, or to prevent the existence of a nuisance detrimental to the health and comfort of the residents upon the adjoining farms. The local health officer had made a report that the establishment could not be the source of specific germs, and consequently was not detrimental to the health of the neighborhood. The board believed that the continuance of the stenches arising from this filthy and nauseating business was an infringement of the law which is intended to protect the people in the comfortable occupation of their homes, and that they were justified in petitioning for relief. It is not to be conceded that the existence of a specific disease germ must be proven to result from any establishment to constitute a nuisance. Inquiries in the neighborhood of this factory brought out the fact that the stenches had caused residents to abandon their property; that premises in the neighborhood could not be sold at any price; that a boarding-house built for the accommodation of summer visitors had lost its patronage; that when the wind was from the direction of this factory of Williams & Lander, sleep was impossible with open windows even in the warmest weather, and that violent attacks of nausea and vomiting had been caused by these vile emanations. The building, which is of little value, was

ordered destroyed, and the work suspended until such apparatus as this board approved should be substituted for that now employed. The owners are attempting to evade the effecting of these improvements on the plea that only a small number of people suffer from the nuisance. The question at once arises whether the few are not entitled to the same degree of protection to which larger communities are clearly entitled. If this business would be a nuisance in the village of White Plains itself, which no one would deny for a moment, it is also a nuisance in the more sparsely settled town of Greenburgh, and must be finally abated. The question of the rights of property is worthy of careful consideration, but no such plea obtains in this case, where a trifling investment of, at most, a few hundred dollars, is allowed to render a square mile of the best part of Westchester county practically uninhabitable and worthless.

Complaints of other nuisances were received, details of which will be found in the addenda to this report, from the following towns in the State:

New Brighton, Staten Island.
Stapleton, Staten Island.
Castleton, Staten Island.
Binghamton.
Oswego.
Greenbush.
Newark Valley.
Waterloo.
Newtown Creek.
Dunkirk.

In several instances these complaints were regarding sewers and the disposal of sewage, and were referred to the State Engi-

neer, as chairman of the committee on drainage, which were thoroughly investigated, and all have either been corrected by the proper authorities, or recommendations adopted to secure such action.

The complaints against the nuisances maintained on Newtown creek continue to be made. The south shore of the creek is under the jurisdiction of the health department of the city of Brooklyn, which has detailed inspectors to watch the establishments complained of, and in order to secure authority for these inspectors to visit the north side of the creek, this board, upon the request of Health Commissioner Emery of Brooklyn, appointed two of the Brooklyn inspectors as officers of the State Board, without compensation from the State, from whom frequent reports concerning all the works on Newtown creek have been received and are herewith transmitted to you. These reports are valuable, not only for the full description of the factories, etc., which are the cause of the complaints, but also for the suggestion of the means to be adopted for relief.

THE INFECTION OF OYSTERS.

The reports in the medical press of an epidemic of typhoid fever at Wesleyan University, at Middletown, Conn., which, upon investigation by the Connecticut State Board of Health, was proven to have been caused by the freshening of oysters at a point so near a sewer outlet as to permit their contamination thereby, led to a careful investigation of the subject by Dr. F. C. Curtis, the medical expert of this board.

The fact of such infection of oysters was proven to be possible and even probable. Not only may typhoid fever germs be thus transmitted, but also diarrhoeal diseases, including cholera, should

it at any time occur in the cities or towns where sewage is thus deposited. Mr. Joseph W. Meserau, State Oyster Inspector, in a communication to this board, called attention to the fact that this process of freshening or floating of oysters was employed at the mouth of Mill Creek, at Port Richmond, Staten Island. Upon investigation Dr. Curtis found this creek to be a small tortuous stream into which several private sewers emptied their contents, some within 800 feet of the point used for depositing the oysters, and the further use of the water at the mouth of this stream was prohibited by order of the board. Although no evidence has been received of any similar condition existing elsewhere in this State, it was recommended that a general prohibition of such "floating" of oysters be issued. Granting that the freshening of oysters may be desirable from the dealer's point of view, artificial floats may be employed for the purpose, and thus the interests of both dealer and consumer be protected equally. The vast consumption of oysters renders the question of their protection of great importance.

THE INVESTIGATION OF TUBERCULOSIS.

The existence of bovine tuberculosis in the State has become so serious a menace to the public health that, at the suggestion of the board, the Legislature passed a law last year directing the appointment of a committee of the board to examine cattle, and attempt to reduce the number afflicted with this disease. From the monthly reports of this committee it appears that in many regions of the State the herds are infected, even in those districts from which New York city received the greater portion of its supply of milk.

The fact is well established also that the bacillus of tuberculosis

may find its way into the human system through the medium of milk from infected animals. The danger from the flesh of such animals is practically overcome by the process of cooking, and also because the muscles of animals are often free from disease when the glandular system and even the lungs are markedly tuberculous. The work of the committee on tuberculosis in cattle has continued the line of investigation followed by the Tuberculosis Commission of the preceding years, but the work has been very limited on account of the meagre appropriation of only $20,000 made for that purpose.

A somewhat careful calculation shows, that to destroy all the cattle affected with this disease in the State to-day, would involve an expenditure of nearly $1,000,000. Should the eradication of the disease from all herds be once accomplished, such rules and regulations as the board is competent to enforce would prevent any importation of infected animals from other States, and thus permanently protect the people from this great menace to the public health. The tremendous importance of this work may be fully realized when it is stated that of the 126,235 deaths occurring in the State during the year, over 10 per cent. of the entire number from all causes were from pulmonary consumption. Hence, it is the unanimous opinion of the board that no other question affecting the public health is of such vital importance, and that the Legislature should be urged to make an appropriation sufficiently liberal to prosecute the work of this committee with the utmost vigor.

CHEMICAL WORK OF THE BOARD.

The examination of drugs has been continued by Dr. W. G. Tucker, chemist of the board, as directed by law. The value of such examinations is of great importance in view of the frequency of adulteration. There has been a lack of funds for the general

expenses of the board, and in order to avoid the necessity of exceeding the appropriation, the services of a collector of samples for analysis have been dispensed with for a portion of the year. This duty could properly be performed by the individual members of the board, provided, compensation were allowed for time thus occupied, and it would be a convenience to those who had occasion to enter complaints to know that reports made direct to a commissioner would receive prompt attention. There have been few, if any, prosecutions of pharmacists who have been found guilty of dispensing impure drugs, and thus one of the chief objects in view, viz.: the prevention of such adulteration, is thereby unattained. The report of the chemist shows that fifty-three samples of potable water have been received and analyzed by him during the year. Frequent requests have been received for bacteriological examination of drinking water, especially for the detection of bacillus of typhoid fever. Thus far, no such examinations have been made by the board, as no facilities for such work are at present available. The Bender Hygienic Laboratory, now being constructed in Albany, will be completed during this year, where every requisite for bacteriological investigations will be provided, and may be utilized by the State if the funds are provided for that purpose. In the numerous instances where lives may be saved by the prompt detection of typhoid germs, as well as those of other infectious diseases, it is urged that the most liberal provision possible should be made for discovering their existence in the drinking water in order that preventive measures may be promptly instituted.

SANITARY CONDITION OF THE STATE.

During the year 126,235 deaths have been reported to the State Board of Health, which gives a death rate of 19.30 per 1,000

population, estimating the population at 6,500,000; or allowing an increase to 6,750,000 the death rate would be 18.60. There have been only half a dozen towns out of the approximately 975 which have failed to report. There were about 2,500 more deaths than in 1894.

The proportion of deaths occurring under 5 years of age was 34.2 per cent. of the total mortality. The proportion has varied in the past ten years from 33.8 to 36.8.

In the Maritime district the mortality of early life constituted 40.7 of the total during the year; in the Lake Ontario and Western district, 31.2 per cent. of the deaths occurred under 5 years of age; in the Hudson valley district, 27.2; and in the other sanitary districts into which the State has been divided the proportion was from 14 to 21 per cent.

The proportion of deaths from common zymotic diseases was less than it has been for several years, constituting 17.81 per cent. of the total mortality.

In the Maritime district 18.47 per cent. of the deaths were zymotic; in the Lake Ontario and western, 18.10; in the Hudson valley, 15.90; while in the rest of the State from 10 to 12 per cent. of the deaths were from these causes.

The distribution of these zymotic diseases is shown by this tabular exhibition, which gives the number of deaths per 100,000 population from each of them in the eight sanitary districts into which the State has been divided:

Showing the number of deaths per 100,000 *population from*

IN THE	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Diphtheria and croup.	Diarrhoeal diseases.
Maritime District	9.6	15.7	8.0	17.7	27.0	6 8	23.8	110.0	170.5
Hudson Valley District	8.0	54.0	7.5	13.7	7.0	5.3	15.8	50.0	113.0
Adirondack and Northern District	4.5	29.5	0.8	7.8	0.8	3.0	5.3	21.0	60.0
Mohawk Valley District	6.5	29.0	2.5	6.5	.....	4.5	9.5	22.0	81.5
Southern Tier District	4.0	30.0	3.2	2.5	15.0	4.5	9.7	30.2	60.5
East Central District	7.0	28 0	4.0	7.0	7.5	4.0	6.0	27.0	73.0
West Central District	4.0	26.0	4.6	2.2	1.6	4.0	5.6	16.2	60.0
Lake Ontario and Western District	6.8	31.0	3.5	5.2	16.0	3.5	9.5	65.0	132.0

Typhoid fever has caused the average mortality of recent years. Outside of two or three places it has not been specially prevalent. A representative of the board made an inquiry into the causes for its prolonged, though not extensive prevalence, in the St. Lawrence State Hospital, at the request of the State Commission in Lunacy; and the recommendations made have been accepted and will be acted upon.

Diphtheria, although a prominent element of fatality among the preventable diseases, has caused fewer deaths than have occurred from it in several years; there was a steady diminution in its prevalence during the year, and especially in the larger cities where the large proportion of deaths from it occur.

Scarlet fever has had an exceptionally low mortality, amounting to 0.7 per cent. of the total. It was largely limited to the eastern part of the State.

Measles has been exceedingly prevalent during the latter part of the year in the eastern part of the State, where it has been extensively epidemic. It is a disease which shows itself in periodic recurrences.

Whooping cough caused about the same number of deaths as measles; it has been prevailing rather extensively now for three years, following two years of its recession. It resembles measles in its variability of prevalence, being like that a disease dependent mainly on immediate contagion.

Diarrhoeal diseases caused about 9,000 deaths which is considerably less than last year. Usually from 7.5 to 9.0 per cent. of the deaths are from this cause.

Malarial diseases are credited with causing only about 300 deaths; for seven years there has been a steady diminution in its

reported mortality. Its largest report is from the Maritime district.

Cerebro-spinal meningitis caused 539 deaths, which is a few more than in 1894, and considerably less than in the three years prior to 1894. Its relative mortality was greatest in the districts having the largest urban population.

Smallpox has not occurred during the year outside of the metropolis, where 21 deaths were reported from it. In 1890 and 1891, each, there were 4 deaths from it; in 1892, 1893 and 1894, there were respectively 126, 234 and 330 deaths from it, and it was widely distributed during 1894. The saving efficacy of vaccination is shown in its prevention of a disease which was once so fatal, and the protective value of the law now requiring the vaccination of school children is especially emphasized.

Consumption continues with little variation to be a conspicuous element of mortality, causing about 10 per cent. of all the deaths.

In each 100,000 *population in the Sanitary Districts there were deaths from Consumption in the*

Maritime.	Hudson Valley.	Adirondack and Northern.	Mohawk Valley.	Southern Tier.	East Central.	West Central.	Lake Ontario and Western.
238	185	138	100	107	134	135	160

These proportions will not vary much from the average of ten years' observation.

Epidemic influenza (grippe) recurred for the sixth time since its appearance in 1889 and caused a large number of deaths.

The following is a tabulation, reported last year, and repeated in this report with the addition of the present outbreak:

Time of occurence.	Acme reached.	Duration.	Number of deaths.
1889-90.....	January, 1890....	Three months....	5,000
Spring of 1891.....	April, 1891.....	Six months	8,000
1891-92.....	January, 1892....	Five months	8,000
Spring of 1893.....	April, 1893.....	Six months	6,000
1893-94.....	January, 1894....	Four months.....	3,000
1895.....	February, 1895...	Four months.....	5,100

It began suddenly in January, 1895, causing 1,400 deaths, as estimated, that month; 1,600 in February; 1,500 in March; and 600 in April. The outbreak was more violent than in 1894.

The following table, taken from a more detailed report in the appendix, shows the distribution of local diseases during the year:

In each 100,000 *population there were deaths from —*

IN THE DISTRICTS.	Acute respiratory diseases.	Diseases of digestive system.	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.
Maritime	328	156	137	150	163
Hudson Valley.....	235	112	100	146	235
Adirondack and Northern..	125	85	50	120	143
Mohawk Valley.....	200	105	91	140	180
Southern Tier.....	152	92	69	119	144
East Central.....	168	104	80	150	172
West Central	149	114	84	150	178
Lake Ontario and Western.	200	80	78	140	190

The year was one of salubrity above the average, showing a general death rate below the normal and with but moderate prevalence of the more common preventable diseases.

The accuracy of the records of the board concerning vital statistics depends largely upon the co-operation of local health officers, and in order to render the State reports of the greatest scientific value, the returns from every local board in the State must be promptly filed with the secretary of the State board. They must

also be complete in every detail, and since great progress has marked the testing pathology and management of preventable diseases in recent years, more comprehensive reports regarding causative effects of climate, location, etc., upon the course of disease has become a necessity, and plans for amending the reports heretofore required are now being considered. A great improvement has been effected in the filing of the certificates by the adoption of the card index, and the binding of the original certificates, thus greatly facilitating the work of the registrars, and the consultation of the records by those interested in such matters.

The importance of the subjects to be considered by the American Public Health Association, was such that the board deemed it wise to accept the invitation received from its officers to send delegates to its annual meeting, and Commissioner Jones and Secretary Smelzer were delegated as our representatives, whose report of the proceedings is herewith transmitted.

Respectfully submitted.

Commissioners ...

DANIEL LEWIS, M. D.,
President.
S. CASE JONES,
MURRAY M. ADAMS, M. D.,
OWEN CASSIDY,
FREDERICK W. SMITH, M. D.,
GEORGE B. FOWLER, M. D.,
T. E. HANCOCK,
Attorney-General.
C. W. ADAMS,
State Engineer and Surveyor.
A. H. DOTY, M. D.,
Health Officer, Port of New York.
BAXTER T. SMELZER, M. D.,
Secretary and Executive Officer.

APPENDIX.

SIXTEENTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH.

Financial Report from October 1, 1894, to October 1, 1895.

Traveling and Necessary Expenses on Official Business.

1894.			
Oct.	1.	John Edwards	$96 93
		M. M. Adams	61 65
		T. A. Stuart	17 01
	2.	F. O. Donohue	138 89
	3.	J. F. Barnes	88 69
	26.	T. A. Stuart	13 16
	31.	F. O. Donohue	60 05
		J. F. Barnes	43 34
Nov.	1.	W. E. Milbank	37 47
	12.	W. E. Milbank	22 52
	27.	T. A. Stuart	12 75
		M. M. Adams	44 70
Dec.	3.	F. O. Donohue	30 85
	5.	J. F. Barnes	19 70
	12.	M. M. Adams	28 61
	19.	Cyrus Edson	23 61
1895.			
Jan.	2.	H. G. Wolcott	165 07
		F. O. Donohue	83 40
	3.	M. M. Adams	46 47
	9.	C. W. Adams	21 15
		T. A. Stuart	21 06
	15.	W. E. Milbank	20 97
	17.	J. F. Barnes	41 68
		John Edwards	20 71
	30.	F. O. Donohue	22 94

1895.

Jan.	30.	M. M. Adams	$3
		T. A. Stuart	1
Feb.	19.	F. C. Curtis	4
	28.	S. Case Jones	1
March	25.	F. O. Donohue	7
		Cyrus Edson	2
		M. M. Adams	3
April	5.	J. F. Barnes	8
	12.	T. A. Stuart	1
		F. C. Curtis	4
	17.	M. M. Adams	4
	25.	S. Case Jones	5
		Owen Cassidy	8
	30.	F. O. Donohue	10
May	3.	J. F. Barnes	8
June	5.	C. W. Adams	1
	12.	Daniel Lewis	1
	24.	T. A. Stuart	1
	28.	W. T. Jenkins	3
July	6.	S. Case Jones	7
		F. O. Donohue	5
	9.	M. M. Adams	4
	11.	Owen Cassidy	7
	18.	Cyrus Edson	3
	30.	M. M. Adams	2
		B. T. Smelzer	2
Aug.	2.	Daniel Lewis	2
	14.	Owen Cassidy	8
	21.	S. Case Jones	5
	24.	B. T. Smelzer	4
Sept.	20.	Hunting & Hammond	
		B. T. Smelzer	5
	23.	F. C. Curtis	3
			$2,67

Temporary and Expert Service.

1894.			
Oct.	1.	Martin Schenck, services as consulting engineer at Fort Plain and Greenwich in connection with water supply.....	$66 87
	3.	Frederick Carman, stenographic and other expert service, including editing and collating material for tuberculosis report.....	578 19
	8.	J. H. Stoller, bacteriological examination of cheese.....	100 00
	31.	Bowen Staley, arranging and recording old documents.....	108 00
	31.	Thomas F. Greely, assisting in sorting certificates, etc.....	81 00
Nov.	1.	Charles E. Thompson, sorting and classifying old correspondence.....	30 00
		Martin Schenck, services as consulting engineer, examining and reporting upon Nyack water supply.....	52 97
	27.	Thomas F. Greely, assisting in sorting certificates, etc.....	78 00
		Bowen Staley, arranging and recording old documents.....	104 00
		Charles E. Thompson, sorting and classifying old correspondence.....	30 00
	28.	Fred'k Carman, services as stenographer and editing tuberculosis report.....	106 69
	29.	Fred'k Carman, stenographic and other expert service, from September 6 to October 31, 1894.....	172 40
	30.	Fred'k Carman, services in connection with Newtown creek investigation....	154 56
Dec.	5.	Martin Schenck, services as consulting engineer at Mt. Vernon and White Plains.....	59 05

1894.			
Dec.	11.	F. C. Curtis, services and expenses at Red Hook.....	$
	17.	W. T. Brady, serving subpoenas in Newtown creek investigation.....	
	19.	Thomas S. Jones, extra services, instructing registrars.....	
		Thomas F. Greely, assisting in sorting certificates, etc.....	
		Bowen Staley, arranging and sorting old documents.....	1
	22.	Ernest J. Lederle, services in connection with New Rochelle water shed, and Newtown creek investigation.....	4
1895.			
Jan.	7.	John Bogart, services and expenses as consulting engineer from November 17, to December 11, 1894.....	5
	15.	Frederick Carman, stenographic and expert service, from December 1, 1894, to January 14, 1895.....	1
		Anna L. Mattimore, extra services in making typewritten copy of testimony in Newtown creek investigation, 900 folios, at 6 cents.....	
	18.	F. C. Curtis, services and expenses investigating suspected case of smallpox at Saratoga.....	
	31.	Thomas F. Greely, assisting in sorting certificates, etc.....	
		Bowen Staley, arranging and sorting old documents.....	1
		Frederick Carman, stenographic and expert services, January 25 to 31.....	
Feb.	28.	Thomas F. Greely, assisting in sorting certificates, etc.....	

1895.			
Feb.	28.	Bowen Staley, arranging and sorting old documents	$96 00
	27.	Martin Schenck, arranging maps and papers, and preparing Engineers' Report for Fifteenth Annual Report	90 00
March	31.	Thomas F. Greely, assisting in sorting certificates, etc	78 00
		Bowen Staley, arranging and sorting old documents	78 00
April	15.	Frederick Carman, stenographic and expert services from February 25, to April 6	138 78
	30.	Thos. F. Greely, assisting in arranging certificates etc	78 00
		Bowen Staley, arranging, sorting and recording old documents	78 00
May	1.	Martin Schenck, services as consulting engineer at Sodus Centre	58 47
		Frederick Carman, stenographic and expert services April 12 to 26	117 80
	20.	Wm. M. Thomas, stenographic services May 16	40 25
	27.	John Spencer, services in examining cattle at Dunkirk	18 00
	29.	Bowen Staley, arranging, sorting and recording old documents	81 00
		Thos. F. Greely, assisting in arranging certificates, etc	81 00
	31.	Martin Schenck, services as consulting engineer at Owego, N. Y	56 78
June	30.	Bowen Staley, arranging, sorting and recording old documents	78 00
		Thos. F. Greely, assisting in arranging certificates, etc	78 00

1895.				
Aug.	1.	Thos. F. Greely, assisting in arranging certificates, etc.		$8
		Bowen Staley, sorting, arranging and entering old documents		8
	6.	F. C. Curtis, expert services in examining as to sanitary condition of school house at Tuckahoe		1
	13.	John P. Martin, stenographic services and expenses from June 28 to July 23		13
	31.	Thos. F. Greely, assisting in arranging certificates, etc.		8
		Bowen Staley, sorting, arranging and entering old documents		8
Sept.	20.	John Bogart, services and expenses as consulting engineer at Castleton, Richmond county, Coxsackie, St. Johnsville, Binghamton, Dunkirk and Edgewater.		40
		Bowen Staley, sorting, arranging and entering old documents		2
				$5,62

Indexing Births, Marriages and Deaths.

1894.				
Oct.	25.	For September	$78 54	
		For September	70 08	
				$14
Nov.	26.	For October	$70 44	
		For October	70 08	
				14
Dec.	19.	For November	$70 20	
		For November	70 08	
				14
1895.				
Jan.	30.	For December	$70 44	
		For December	70 08	
				14

1895.				
Feb.	28.	For January	$70 08	
		For January	70 08	
				$140 16
March	28.	For February	$70 20	
		For February	71 22	
				141 42
April	30.	For March	$69 96	
		For March	70 28	
				140 24
May	31.	For April	$70 12	
		For April	70 20	
				140 32
June	12.	For May	$60 00	
	27.	For May	70 56	
	30.	For May	70 44	
				201 00
July	23.	For June	$70 32	
		For June	70 00	
				140 32
Aug.	31.	For July	$70 04	
		For July	70 08	
				140 12
Sept.	30.	For August	$70 32	
		For August	91 08	
				161 40
				$1,774 92

Salaries and Wages.

1894			
Nov.	1	Salaries for October	$961 66
Dec.	1.	Salaries for November	961 66
1895			
Jan.	1.	Salaries for December	991 68
Feb.	1.	Salaries for January	999 99
March	1.	Salaries for February	1,119 99
April	1.	Salaries for March	1,100 02
May	1.	Salaries for April	1,074 99
June	1.	Salaries for May	999 99

	1.	Salaries for June	$1,000 02
	1.	Salaries for July	1,016 66
	1.	Salaries for August	1,016 66
	1.	Salaries for September	1,016 68
			$12,260 00

Petty Cash.

1894.			
Oct.	4.	F. S. Webster & Co., record ribbons	$2 25
Dec.	10.	Harry W. Riggs, cylinder for typewriter	3 00
1895.			
Jan.	4.	James B. Lyon, wrapping and shipping reports	50 00
	16.	J. J. Jones, ink for pads	5 00
Feb.	19.	S. & P. Templeton, library steps	2 50
March	30.	James D. Walsh, administering oath to notary	5 00
April	6.	T. F. Romeyn, boxes for certificates	36 00
	17.	Stuart G. Speir, typewriting supplies	3 90
May	31.	A. M. Michael, stamp and pad	3 35
Sept.	4.	W. K. Sanders, record ribbons	4 50
			$115 50

Printing and Stationery.

1894.			
Oct.	1.	Albany Engraving Co., tracing maps for report	$50 00
		F. C. Manning, printing letter heads	25 00
	10.	James B. Lyon, printing and binding 200 copies of Dr. Tucker's report	124 00
	31.	Peter J. Halpin, printing wrappers and envelopes	45 00
Nov.	9.	The Argus Co., printing monthly bulletins, letter heads, postal cards and making registers	124 00

1894.			
Nov.	27.	Quayle & Son, engraving and stamping letter heads and envelopes.....	$29 59
Dec.	1.	The Argus Co., printing monthly bulletins, blank book titles, etc.....	78 75
	6.	S. T. Craig, typewriting.....	2 88
	31.	Rogers, Ruso & Kelly, ribbon for typewriter.....	50
1895.			
Jan.	3.	Hudson Valley Paper Co., automatic fastener.....	3 50
	5.	Rogers, Ruso & Kelly, typewriting.....	2 50
		Rogers, Ruso & Kelly, typewriter ribbons,	8 00
	14.	Peter J. Halpin, printing envelopes and slips.....	52 00
Feb.	9.	The Argus Co., printing monthly bulletins and making death registers.....	160 45
		C. Van Benthuysen & Sons, making index books.....	58 50
	28.	The Argus Co., printing monthly bulletins and circulars.....	91 80
March	1.	Weed-Parsons Printing Co., printing circulars and cards.....	31 15
		Quayle & Son, engraving letter heads and envelopes.....	14 10
April	9.	The Argus Co., making registers and indexes.....	154 00
May	3.	Peter J. Halpin, printing cards and envelopes.....	102 00
	27.	Weed-Parsons Printing Co., printing postal cards and blanks.....	89 00
July	6.	The Argus Co., subscription for one year.	7 50
	8.	Weed-Parsons Printing Co., printing postal cards, envelopes and notepaper.	80 30
	18.	Quayle & Son, stamping letter heads....	4 50

1895.

Aug. 5. Weed-Parsons Printing Co., printing monthly bulletins, cards and circulars. $

28. The Argus Co., printing and binding monthly bulletins and making registers.....

Sept. 6. Weed-Parsons Printing Co., binding roster, printing monthly bulletins, circulars and cards.....

$1,

Telegraph and Telephone.

1894.

Oct. 1. Hudson River Telephone Co.....

2. Western Union Telegraph Co.....

Nov. 9. Western Union Telegraph Co.....

Hudson River Telephone Co.....

Dec. 1. Hudson River Telephone Co.....

4. Western Union Telegraph Co.....

1895.

Jan. 3. Hudson River Telephone Co.....

Western Union Telegraph Co.....

Feb. 1. Western Union Telegraph Co.....

Hudson River Telephone Co.....

March 1. Hudson River Telephone Co.....

Western Union Telegraph Co.....

April 1. Western Union Telegraph Co.....

Hudson River Telephone Co.....

May 1. Hudson River Telephone Co.....

Western Union Telegraph Co.....

June 1. Hudson River Telephone Co.....

Western Union Telegraph Co.....

July 1. Western Union Telegraph Co.....

Hudson River Telephone Co.....

Aug. 1. Hudson River Telephone Co.....

Western Union Telegraph Co.....

1895.			
Sept.	1.	Western Union Telegraph Co.....	$18 02
		Hudson River Telephone Co.....	11 49
			$205 34

Library, Maps and Charts.

1894.			
Oct.	23.	B. Westermann & Co., German publications.....	$0 80
Nov.	13.	B. Westermann & Co., subscriptions for monthly publications.....	13 50
Dec.	3.	The Engineering News Publishing Co., subscription for 1895.....	5 00
	8.	B. Westermann & Co., German publications.....	1 50
1895.			
Jan.	2.	B. Quinn, railway guide.....	5 00
	7.	The Argus Co., directory.....	2 00
	9.	The Sanitarian, subscription for 1895....	4 00
Feb.	12.	B. Westermann & Co., German publications.....	2 84
March	7.	The Engineering Record, year's subscription.....	5 00
June	10.	Sampson, Murdock & Co., directory.....	3 00
July	9.	Julius Bien & Co., atlas of State of New York.....	30 00
Aug.	24.	Capitol news stand, papers and magazines.....	5 70
			$78 34

Food and Drugs.

1894.			
Nov.	1.	W. G. Tucker, salaries and expenses.....	$349 38
Dec.	1.	W. G. Tucker, salaries and expenses.....	294 31
1895.			
Jan.	1.	W. G. Tucker, salaries and expenses.....	306 76

1895.			
Feb.	1.	W. G. Tucker, salaries and expenses....	$268 3
March	1.	W. G. Tucker, salaries and expenses.....	209 5
April	1.	W. G. Tucker, salaries and expenses.....	401 6
May	1.	W. G. Tucker, salaries and expenses.....	268 8
June	1.	W. G. Tucker, salaries and expenses.....	269 6
July	1.	W. G. Tucker, salary.....	125 0
Aug.	1.	W. G. Tucker, salary.....	125 0
Sept.	1.	W. G. Tucker, salary.....	125 0
Oct.	1.	W. G. Tucker, salary.....	125 0
			$2,868 5

Registrars.

1894.			
Oct.	2.	Thomas C. Lawler	$100 0
	10.	L. F. Rolfe	150 0
Nov.	1.	Thomas C. Lawler	150 0
		Thomas S. Jones	150 0
	19.	L. F. Rolfe	150 0
	28.	Thomas S. Jones	150 0
Dec.	3.	Thomas C. Lawler	150 0
	11.	L. F. Rolfe	50 0
	19.	Thomas C. Lawler.....	50 0
		L. F. Rolfe	150 0
	29.	Thomas S. Jones	150 0
1895.			
Jan.	15.	Thomas C. Lawler	55 0
Feb.	1.	Thomas C. Lawler	150 0
Jan.	28.	L. F. Rolfe	150 0
		L. F. Rolfe	150 0
	30.	Thomas S. Jones	150 0
Feb.	28.	Thomas S. Jones	150 0
		L. F. Rolfe	161 0
		Thomas C. Lawler	150 0
March	31.	Thomas C. Lawler	150 0
		Thomas S. Jones	180 0

1895.			
March	30.	L. F. Rolfe	$180 00
April	30.	Thomas C. Lawler	150 00
		Thomas S. Jones	150 00
		L. F. Rolfe	180 00
May	28.	L. F. Rolfe	170 00
	29.	Thomas S. Jones	150 00
June	7.	Thomas C. Lawler	150 00
July	1.	Thomas S. Jones	150 00
		L. F. Rolfe	250 00
	25.	L. F. Rolfe	325 00
Aug.	1.	Thomas C. Lawler,	225 00
		Thomas S. Jones	150 00
	28.	Thomas S. Jones	170 00
	29.	L. F. Rolfe	175 00
Sept.	1.	Thomas C. Lawler	115 00
			$5,536 00

PLANS

FOR

SYSTEMS OF SEWERAGE

AND

SEWAGE DISPOSAL.

GOWANDA.

System of Sewers.

To the Special Sewer Committee, Board of Trustees, Gowanda, N. Y.:

Gentlemen.— We have the honor to submit herewith our report and estimate for the proposed system of sewers for your village, together with explanatory map and profiles, and specifications governing the construction of said sewers.

Reference to the map and profiles will show, and make intelligible the reasons for a departure from the original plan for the system in the section of the village east of Cattaraugus creek. It was at first thought advisable to run all the sewage of the eastern section of the village to the foot of East Main street, and eventually to carry the same across the stream by means of a siphon, discharging into the main trunk line running through Main street, Centre street, College grounds, Chapel street and Water street, and thence to the present proposed point of discharge near the foot of Aldrich street. The plan now recommended is to run the sewage of that entire eastern section through Buffalo street to Union street, thence down Union street, discharging into the stream, as shown on the plans. The first plan, while feasible, is found to increase the cost of the complete system, which will be necessary for you to build, in the course of time, by many thousands of dollars. It will be easily seen that the extra heavy cutting, and the necessary increase in sizes of the main sewers in the western section of the village, and the laying of a 150-foot siphon across the stream must vastly overbalance in cost the extra cutting required on Buffalo street in the plan now presented for your consideration. The recommendations of this report, therefore,

shall be on the basis of the plans and profiles herewith prese
which involves two main points of discharge, one on the eas
and one on the westerly side of the stream.

Treating first of the disposal of the sewage from the entire
tem, it requires but a slight acquaintance with the locatio
know that the two points of discharge selected and shown or
plans are perfectly safe from a sanitary standpoint. They
well removed from any habitation whatever, and, with the
stant flushing of the river, can at no time become objection
Observations taken at the Main street bridge at a time when
stream was as low as at any time during the dryest season, sho
the body of the stream to be 120 feet wide, and on an avera
feet deep, running at the rate of 100 feet per minute. This
proximates that at this point there passes 180,000 gallons of w
per minute, 10,800,000 gallons per hour, 260,000,000 gallons
day, under the most unfavorable circumstances. Some 20
300 feet below the point described, the river narrows gradual
an average of 75 feet in width, and here falls much more rap
carrying this same bulk of water necessarily at a doubly r
rate through the remainder of the village and beyond the se
outfalls. The population of Gowanda at this time is less t
2,300 people. Considering 4,000 as a fair estimate of the fu
size of Gowanda, no more than 500,000 gallons of sewage per
will ever be required to be carried and diffused by this great l
of swiftly flowing water—always flowing in the dryest sea
This stream extends back into the country for over 20 miles, dr
ing an enormous area. At every rainfall the river rises rap
and at every large storm and freshet a vast flood of incalcul
volume and power rushes through this one water course fo
this region, carrying everything before it. Below the village
conditions remain the same, practically, until the stream end
course into the lakes, 35 miles away. The stream ente
sparsely inhabited region just below the village, and not unt
has flown 6 or 7 miles does it reach the one and only cluste
habitation on its banks— a hamlet of little over 100 people-

which time the sewage has long since been rendered utterly harmless.

Furthermore, it shall be remembered, this stream is scarcely available for use as water supply, and as this entire region abounds in pure and plentiful springs, its waters would never be adopted for that purpose.

Careful consideration of these statements and figures should convince every mind that the natural discharge into the stream at the points indicated is entirely without objection from a sanitary standpoint.

Little remains to be said concerning the system in the town. The sizes and grades established are sufficient for all time. Any section may be built and extensions made at any time connecting with the general system. Attention should be drawn to that section of Water street and Commercial street south of Walnut street, on which no provision for sewers has been made on the plans. Reference to the profiles will show the cause at once. The present lay of the ground and the street grades established by Mr. J. S. Youngs, in 1887, render it impossible to bring that short stretch into the general system now designed. The only remedy to this condition is to raise the street grades, running a nearly direct grade from the corner of Chestnut and Commercial streets to the corner of Water and Walnut streets. This could be done only at a great cost for filling in with earth and protecting the improvement with masonry or piling from the ravages of the stream at flood time. This spot, however, boasts of few houses, and little promise for many years to come, and direct drains from the few houses to the river could be laid without offense or danger, should it be desired.

The form of specifications presented herewith has been compiled with great care, with the view of obtaining the best material and workmanship in all great and detail matters as well.

Our personal knowledge of construction work in the near vicinity, and under like conditions of soil and general formation, enables us to present our estimate of the cost of the work with

special confidence in its close accuracy; and while an engineer can never guarantee an estimate for work of this character without being empowered to sink test pits at intervals over the ground, we are confident the system can be constructed for, or even less, than the figures we now present.

Our estimate for the complete system of all streets laid out within the corporation lines, including all lines, appurtenances, contingencies, and engineering is, approximately, $27,700.

By leaving out the following-named lines, which may not be needed now, or for some time to come, the expense may be materially decreased:

Buffalo street, north of Union street.

West avenue.

New street (so called on plan for distinction).

Johnson street.

Railroad crossing.

Palmer street.

Broadway.

High street.

College street.

Water street (Chapel to Jamestown).

The system without the above-named lines would cost, approximately, $22,000.

The above figures are made with the view to cover all possible contingencies, and upon the work being advertised for bids, a still lower figure may be reached.

It would be superfluous here to commend to you, your early action towards securing a complete system of sanitary sewers for your village.

The under-ground conditions peculiar to that locality, the position of the tributary streams, and the great number of cesspools, operative and abandoned, throughout the town, are facts well known, and speak for themselves, assuring, as they do, a constant filtering of polluted water through the subsoil, to the constant menace and detriment to the general health.

The utmost care has been given to the plans and recommendations of this work, and we take pleasure at this time in submitting them for your consideration.

Very respectfully,

HEDENBERG & KINSEY,

Engineers.

SUPPLEMENT TO REPORT.

Settling and Upward Filtration Tanks for Gowanda, N. Y.

If at any time the discharge of the crude sewage system into the Cattaraugus river should become objectionable, settling and upward filtration tanks could be constructed at each outlet, as per plans submitted.

The sewage is received from the town at "M," and passes into a distributing manhole having two outlets opened or shut off at pleasure with valves or plugs. Each of these outlets lead to a set of two tanks. When operating, the sewage is allowed to enter one set of tanks at a time. It enters the first one of this set and drops to the bottom. As the tank fills, the solid matter settles at the bottom, and the liquid rises and passes through the filter frames, which are filled with excelsior and charcoal or like material. It then passes into the second tank and goes through the same operation, finally discharging at "N," freed from all solid matter and partially purified. When it is desired to cleanse this set of tanks, the sewage is turned into the other set. The liquid matter still remaining in the first set is pumped into the second set by means of a hand pump. The solid deposit at the bottom is then mixed with lime, which deodorizes it, and which may then be disposed of as a fertilizer.

The tanks are made of concrete, and are inclosed in frame buildings. A fire place and sheet iron chimney maintain an upward draught of air, taking away all offensive odors about the building.

As the population increases, a new set of tanks may be added when necessary. The cost of the tanks would be, approximately, $4,000, and their maintenance about $800 per annum.

COOPERSTOWN, OTSEGO COUNTY.

Extension of Sewer System and Report on Sanitary Condition.

COOPERSTOWN, N. Y., *August* 29, 1895.

State Board of Health, Albany, N. Y.:

Gentlemen.— Inclosed please find recommendations of our local Board of Health for a "Lake" sewer, and also the approval of our board of trustees of this village. The recommendation is according to report of Mr. John Bogart, consulting engineer.

We wish to build this sewer this fall and ask the approval of the inclosed documents as soon as your honorable body can act on it.

Truly yours,

M. R. STOCKER,
President Village of Cooperstown, N. Y.

E. D. STOCKER,
Clerk.

To the Board of Trustees of the Village of Cooperstown:

Gentlemen.— Pursuant to chapter 928 of the Laws of 1895, entitled "An act to amend chapter 661 of the laws of 1893, entitled 'An act in relation to the public health, constituting chapter 25 of the general laws.'" The Board of Health of the village of Cooperstown do hereby certify that the sewers of such village are insufficient to properly and safely sewer such village and protect the public health. In or about the month of September, 1893, the Board of Health of said village deemed it necessary to procure the assistance of a sanitary engineer to ascertain the causes of a then existing epidemic of typhold fever in said village. By the advice of the State Board of Health, the Hon. John Bogart of New York was employed as sanitary engineer to make such examination. His report, submitted to the Board of Health of

said village recommends, among other things, that such addition should be made to the main sewers of said village as might be necessary to prevent the discharge into Lake Otsego, of a portion of the sewage of said village as was being done under the then existing system of sewerage. His examination disclosed the fact that at that time, at least eight private sewers were emptying into the lake, polluting its waters and rendering the same unfit for the use of said village, if any portion thereof should enter the pipe from which the village obtained its supply of water. That the water supply of said village, except what was obtained from a few wells, was wholly taken from Otsego lake through a supply pipe extending up the lake about 1,200 feet from shore. The chances of this water supply being polluted by said private sewers and thereby endangering the health of the people of said village, was considered by said engineer to be very great, and he advised that immediate measures be taken to prevent pollution of said waters by said sewers. The present main sewer in said village, extending from a point near Willow brook, along the shore of said lake to a point below the pump-house, can not be used to sewer the northwestern part of said village, including the western part of Lake street, the same being so located as to be inaccessible to a large portion of the property located in the northwestern part of said village. The Board of Health of said village hereby recommend that an addition be made to said main sewer, beginning at a point at or near the foot of Nelson avenue, extending along the shore of the lake to a point near the mouth of the river, there to connect with the main sewer already laid; that a survey, map and profile has already been made by a competent engineer of the proposed addition to the main sewer, and this board recommends that such addition be laid in accordance with such survey. That the reasons of the board as to the necessity of such addition to the main sewer are the facts hereinbefore given and the necessity of taking prompt measures to prevent any possible pollution of the water supply of said village and danger to the health of the inhabitants of said village therefrom. A copy of the report of said engineer, in which the board fully concurs, is submitted

herewith as a part of this certificate, all of which is respectfully submitted.

SAMUEL WARREN,
E. D. STOCKER,
W. S. BASINGER,
JAS. W. TUCKER,
Board of Health of the Village of Cooperstown.

Motion made and seconded that the Board of Trustees of the village of Cooperstown hereby approve the recommendations of the Board of Health in relation to the proposed lake sewer, and hereto annexed. Vote stood: Affirmative — M. R. Stocker, president; Malerchi Kreehm, W. S. Basinger, Robert C. Couvelland, H. J. Brady.

Carried.

E. L. STOCKER,
Clerk.

ALBANY, *October* 2, 1895.

At a meeting of the State Board of Health, held in New York city, September 18, 1895, the recommendations of the Board of Health of the village of Cooperstown, for the construction of a lake sewer, were approved, under and in accordance with the provisions of chapter 928 of the Laws of 1895.

BAXTER T. SMELZER,
Secretary.

Report of John Bogart, Civil Engineer.

71 BROADWAY, *New York, February* 15, 1894.

The Board of Health, Cooperstown, N. Y.:

GENTLEMEN.— I present my report of an examination made at your request in regard to certain matters connected with the sanitary conditions of your village.

Cooperstown lies at the southern end of Otsego lake. The outlet of the lake, which is one of the sources of the Susquehanna river, runs through the village, the larger part of which is west of

the outlet. The topography of the village is irregular, the variations of the surface considerable, and the grades of the streets such as to generally facilitate the disposal of storm water. There is one depression — Frog Hollow,— which has no present drainage outlet, but which can be drained, as its bottom is above the level of the river. The drainage of this depression should receive attention.

Sewers.

A plan for the general sewerage of Cooperstown was made by direction of the trustees of the village in 1882. It provided for both surface drainage and house sewage in the same pipes, by what is termed a combined system. It was never carried out. Sewer pipes have, however, been laid in many of the streets. These are of a size sufficient only to receive house wastes and are intended to be used as parts of a separate system, that is, a system into which storm or surface water is not to be admitted, but only the effluent from houses. The requisite flushing of these pipes is done under the direction of an official of the village. The existing sewers are in two systems. One, which extends through Susquehanna avenue and Beaver, Eagle, Elm, and part of Chestnut street, has its outlet directly into the river at the side of the Susquehanna avenue bridge, some distance (about 1,500 feet), below the dam and water works. The other system of sewers, which provides for the more northerly part of the village, delivers its effluent into a trunk line which begins at Lake street near Willow brook, and which thence runs along the shore of the lake and along the shore of the river to the pond just above the water works dam, and across and under that pond to an outlet into the river. I am informed by Mr. J. Warren Lamb, who I understand has largely directed their construction, that the pipe sewers have been carefully laid. In my opinion they should be extended as rapidly as possible, so that all the houses in the village can have convenient sewer connections. In my opinion, also, all houses which can be connected with sewers should be connected, and thus the use of privies and privy vaults and cesspools, or any disposal of house wastes except through the sewers, should be discontinued.

The energetic measures taken already by the village board of health to secure the best sanitary results at existing privies not connected with sewers, are most praiseworthy and should be continued.

In any extensions of the existing sewers careful study should be made as to size of pipes, grades, connections, flushing arrangements, etc. In fact, the best and decidedly the most economical results would be secured if a plan were prepared by a competent engineer, providing for a complete system extending through every part of the village. Then all additions would be made in conformity with that plan, which could be carried out from time to time as required by circumstances.

A portion of the outlet trunk line of the northerly system of sewers is an iron pipe, which I understand extends along the bank of the river and under the pond, from a point not far from where the line of Church street extended would strike the river, to a point under the bottom of the pond, where a stand or vent pipe exists surrounded by a wooden boxing. This latter point is not far, northerly, from the dam. The rest of the line, below and above the iron pipe, is vitrified pipe. It is a question whether this trunk outlet pipe from Lake street along the lake and river to the outlet, is large enough for the future volume it may have to carry when the general sewer system is extended, as it must be to properly take care of the village. This, however, must be decided by a study of the length of the sewers which would empty through this outlet, and of the volumes they would send to it. I think that the pipe along the river would be safer in all respects if it were all of iron; but before replacing the existing vitrified portion with iron, a determination as to its proper permanent size must be made, as indicated above.

The location and condition of this outlet sewer pipe along the border of the lake and river may have a serious bearing upon the sanitary conditions of the village. It was, therefore, as carefully inspected as could be done without uncovering it by excavation, the existence of a number of man-holes and vent pipes making such an examination practicable.

The line is laid very close to the river, and at places, as for instance along the abutment of Main street bridge, actually under the bed of the river. It has only a moderate covering and, therefore, should there be leaks at the joints, the sewage could find its way out from the pipes and into the water of the river. At a point a little south of the Main street bridge the pipe at hand-hole seems to be depressed, as the water stands in it although there is a flow both above and below. The pipe had considerable deposited matter in it at the hand-holes. In my opinion there is no assurance that it is in perfect condition, but rather a strong possibility of leakage. All this should be at once examined and made perfect. The arrangements for flushing this portion of the sewage system are not very good, and from the condition of the pipe at the man holes and vent holes, I think that more frequent flushings, and possibly some additional means for this purpose, are desirable.

Sewage From Houses Not Connected With the Sewer System.

The existence of a large number of privies, cesspools and privy vaults has been referred to above. Some of these are of very objectionable character, but I understand that measures have been taken to secure suitable treatment in these cases. Quite a number of houses have pipes or conduits directly connecting them with the lake or river. I saw several instances of this along the lake west of the river, and the water of the lake was at those points quite foul. Whatever current exists is from the lake to the river, and, therefore, the tendency is to carry more or less of such sewage deposit into the river, gradually, down toward the dam. There are also pipes discharging sewage directly into the river itself, two of which were particularly noticeable, one on the east side and one on the west side.

Water Supply.

The water used for drinking is now principally obtained from the pipes of the water works company. To some extent water from wells is used, but the great convenience of drawing water

under pressure from pipes in the houses, and a well-founded doubt as to the maintenance of the purity of the well water, have led to a large introduction of the water works water, and its use is increasing constantly.

While there are probably special instances of wells in private grounds, beyond the limits of the more closely built up sections of the village, whose water may be quite free from danger of pollution, yet with these exceptions there can be no question as to the fact that the use of water from wells in the village is a menace to health. This danger increases with the growth of the village and with the introduction of water under pressure. There are many water closets not yet connected with the sewers, and there is a much more free and larger use of water when it is obtained easily by turning a faucet, as compared with its use when it has to be pumped or drawn from wells. An increased saturation of the ground results and wells become the foci of drainage, towards which water flows, carrying with it possibilities of pollution. It is, therefore, desirable that the use of water from wells for drinking should cease as soon as a pure and healthful supply can be secured from other sources. The attention of the board of health has already been given to this matter, and its action has been in the proper direction.

The Water Works and the Supply From Them.

The pumps which raise the water for the village supply are in a building just below the pond which is formed by a dam across the Susquehanna river about 3,000 feet below the southern shore of Otsego lake. This dam holds the water at the level of the lake, the river above the dam being, therefore, an artificial extension of the lake. The water above the dam is about 300 feet wide and at about 600 feet above the dam it narrows to a width of from 60 to 100 feet, which continues to the lake. The motive power comes from two turbines, which are run by the water from the river, which has here a fall of about eight feet. These turbines are connected with two double Worthington pumps, each having two cylinders, eight and one-half inches diameter and ten inches

stroke. These force the water directly into the village supply pipes. There is no reservoir, nor is there a stand pipe. There is one air chamber connected with all the pumps, and one water safety valve held by a weighted lever. There is also a steam duplex Worthington pump, with water cylinders 10x12 inches, which I am informed is held in reserve for use in case of fire in the village. The boiler for use with this pump is in a small building connected with the pump-house. There is a suction pipe for each double-turbine pump and a separate suction pipe for the steam pump. These suction pipes draw their supply from a brick well under the floor of the pump-house. This well is seven feet long by three feet wide and ten feet six inches deep, below the floor.

The suction pipes to the two water power pumps are seven inches in diameter; the two outlet pipes from these pumps are seven inches diameter each, which, with the intervention of an air chamber, deliver into the village main pipe, eight inches in diameter. I am informed that there are now about 490 taps, and that additional connections are constantly being made.

The steam pump is kept in readiness for use in the event of fire, and it also might be used in case of very low water and drouth. The whole water right at this place is owned by the water company. The only power used beside that by the pumping-house turbines is for a small cider press, by permission of the water company.

The arrangements in connection with the well (from which all the water pumped into the city mains is taken), are as follows: The suction pipes for the two water power pumps are at the side of the well nearest the pumps. These suction pipes descend into the well to a depth of eight feet six inches below the pump-house floor. They have a check valve at bottom and are provided with strainers. The suction pipe for the steam power pump enters the well at the opposite angle from the other suction pipes.

The water supply enters the well by gravity through a ten-inch pipe from Otsego lake. The bottom of this pipe, where it enters the well is one foot three inches above the bottom of the suction pipes to the pumps. The extension of this pipe to, and into the lake is described below.

The turbines which furnish power are below the northern portion of the pump-house floor. They are fed by a flume from the pond above the dam, the water passing to the turbines through a grating in the northern wall of the pump-house. The turbine chamber, which is filled with the pond or river water, is separated from the basement of the pump-house by a wooden bulkhead. Through this basement runs the ten-inch pipe which conveys the lake water to the well. In this basement there is also a pipe, ten inches in diameter, which, passing through the wooden bulkhead, directly connects the turbine chamber with the ten-inch lake water supply pipe. There is a valve on this cross pipe between the bulkhead and the lake supply pipe. The stem of this valve passes through the pump-room floor and the valve is opened and closed by a hand wheel in the pump-room. When this valve is opened water will pass freely from the pond or river, directly into the well, and will continue so to pass until the water in the well is on a level with the pond water in the flume, unless the water in the well is lowered by the pumps. It is, therefore, entirely possible for the man in local charge at the pump-house to pump into the village supply pipes, water directly from the pond above the dam. Whenever the valve mentioned is opened this pond water must pass into the supply well.

There is another connection between the turbine chamber and the well, by means of a vitrified pipe which passes from the bulkhead to the well at a higher level than the cross pipe just above mentioned. This vitrified pipe connection is controlled by a valve whose handle is in the pump-room. I am informed that this latter connection has not been used since the lower cross pipe was put in.

Pipe Conveying Water From Lake to Pump Well.

The pipe which conveys water from the lake for the village supply is of ten inches diameter. Its inlet end is in Otsego lake at a distance, as I am informed, of about 1,200 feet from the shore of the lake, measured from the point where the river leaves the lake. The pipe lies upon the bottom of the lake and is continued down the river to the pumping station, lying for all this distance upon

the bottom of the river. The pipe was laid over twelve years ago. The portion of the pipe in the lake was put together in the winter on the ice.* The outer end is where the water is about thirty-five feet deep. The end is supported by a construction of twelve-inch timber put together in the form of an equilateral triangle of twenty feet vertical height.

This construction was adopted to assure a bearing upon the lake bottom. The pipe passes through a hole in the center of this triangle. On the end of the pipe beyond the triangle was fitted a universal joint and from this joint was suspended a perforated copper strainer. The bottom of the strainer would be about three feet above the bottom of the lake. There is no crib or other construction connected with the inlet to this pipe, as far as I can ascertain, other than as above described and no means of examination of this inlet seems practicable, except with the aid of a diver with helmet and air pump. I understand that the inlet to the pipe has not been examined since its construction. The water gradually becomes shallow as the shore is approached. I am informed that lead was used in making the joints of the portion of this pipe which is in the lake. From the lake to the pond just above the pumping station the water in the river is shallow, from two to five feet in depth, except at a few places where there are deeper depressions. The supply pipe lies upon the bottom of the river in plain view from the surface. It is not in a trench, and does not seem to be protected in any way, except by the covering of river water. At two or three places, where the deeper depressions occur, there are special joints to pass the pipe over the more abrupt vertical angles of the river bottom. All the other joints in this pipe on the river bottom were closed by rope or hemp gaskets passed into the spigot of the pipe, and the joint above the gasket then filled by wooden wedges shaped for the purpose and driven tightly down. No lead was used. This may have secured a tight joint at the time of construction, and possibly for a considerable time after construction. I have passed several times recently in

*The information as to the pipe was given me by Mr. J. Warren Lamb, to whom I am also indebted for much other information in regard to the water works, sewers, etc.

a boat over these pipes and the wedges remaining at the sides and upper portion of the pipe are clearly seen, but with vacant spaces between them, where evidently the wedges have disappeared.

This pipe, as stated above, enters the well in the pump-house, delivering there its water by gravity. The head which causes flow through it is the difference between the level of the water in the lake and the level of the water in the well. While the pumps are acting this head exists, and while there is a flow through the pipe there is a tendency for the water in the river to enter the pipe through any openings which may exist in the joints.

Typhoid Fever.

The request by the board of health of the village for a special sanitary investigation was caused by the occurrence during the late summer and the autumn of 1893, of a number of cases of typhoid fever. As always occurs in a community, under such circumstances, there was a strong indisposition to believe that anything like an epidemic existed, particularly when its condition has been generally healthful, its location as excellent as that of Cooperstown, and its advantages apparently perfect from a sanitary point of view. The board of health, however, had made careful inquiry and after my first visit, at my request, prepared a statement of the cases which had actually occurred, giving me the location and some of the history of each case. There was included in this statement a record of twenty-eight cases which were believed to be undoubtedly typhoid fever, and several other cases which were called " remittent fever." In the statement regarding each case there was noted, as requested by me, whether the house in which it occurred was connected with the sewer system, or whether a privy or cesspool was used, and also what was the water supply in use. The only one of these points common to every one of these cases was that the lake water was used as pumped from the water works.

In considering the probable cause of the existence of this fever, some points as to certain peculiarities of typhoid may be presented:

"Typhoid fever is an infectious disease* and prevails especially in temperate climates, and mostly in autumn months; it has been called the "autumnal fever." It is a disease of youth and early adult life. As in other fevers, not all exposed to the infection take the disease, and there are grades of susceptibility; some families seem more disposed to infection than others. The researches of Eberth, Koch, Gaffky, and others, have shown that there is a special micro-organism constantly associated with typhoid fever. It is a rather short, thick, mobile bacillus, with rounded ends, in one of which, sometimes in both (particularly in cultures), there can be seen a glistening, round body, believed to be a spore; but these polar structures are probably only areas of dense protoplasm. It grows readily on various nutritive media, and on potato in a characteristic manner, as the growth is invisible. This feature is not peculiar, however, to the typhoid bacillus. It is difficult to differentiate from the bacterium coli commune, except by certain chemical tests." * * * * * *

"In recent cases of typhoid fever the bacillus is found in the lymphoid tissues of the intestines, in the mesenteric glands, in the spleen, and in the liver. It occurs also in irregular clumps in the contents of the intestines and in the stools. The bacillus is said to have been found rarely in the blood, in the rose-colored spots (?), and in the urine.

"Outside the body the bacilli retain their vitality for weeks in water. Whether an increase can occur is not yet finally settled. Bolton denies it, but the general opinion seems to be that such increase may take place to some extent. They disappear from ordinary water, in competition with saprophytes, in a few days. In milk they undergo rapid development, without changing the appearance of the milk. They may increase in the soil and retain their vitality for months. They are not killed by freezing but, as Prudden has shown, may live in ice for months. In many epidemics the bacilli have been detected in the infected water. The detection, however, of the typhoid bacillus in drinking water is by

*From "The Principles and Practice of Medicine," by William Osler, M. D., of Johns Hopkins University, New York, D. Appleton & Co., 1892.

no means easy, and the question in individual cases must be settled by experts who have had special experiences with this germ. Both Prudden and Ernst have found it in water filters."

Modes of Conveyance.

(a) "*Contagion.*—Typhoid fever is certainly not a very contagious disease, but the possibility of direct transmission must be acknowledged. The poison is not given off from the skin or in the breath, but in the foeces. Practically only those persons are liable to contract the disease in this way, who have to do with the stools or with the body linen of patients. I have known several instances in which nurses appear to have ben infected under these conditions.

(b) "*Infection of water is unquestionably the most common mode of conveyance.*—Many epidemics have been shown to originate in the contamination of a well or a spring. A very striking one occurred at Plymouth, Pennsylvania, in 1885, which was investigated by Shakespeare. The town with a population of 8,000 was in part supplied with drinking water from a reservoir fed by a mountain stream. During January, February and March, in a cottage by the side of and at a distance of from sixty to eighty feet from this stream, a man was ill with typhoid fever. The attendants were in the habit at night of throwing out the evacuations on the ground toward the stream. During these months the ground was frozen and covered with snow. In the latter part of March and early in April there was considerable rainfall and a thaw, in which a large part of the three months' accumulation of discharges was washed into the brook, not sixty feet distant. At the very time of this thaw the patient had numerous and copious discharges. About the tenth of April typhoid fever broke out in the town, appearing for a time at the rate of fifty a day. In all about 1,200 people were affected. An immense majority of all the cases was in the part of the town which received water from the infected reservoir.

"*Milk also may be the source of infection.*—One of the most thoroughly studied epidemics due to this cause was that investi-

gated by Ballard in Islington. The milk may be contaminated by infected water in cleansing the cans. In fresh milk it has been shown that the germs grow rapidly.

"Filth, bad sewers, or cesspools can not in themselves cause typhoid fever, but they furnish the conditions suitable for the preservation of the bacillus, and possibly for its propagation.

(c) "*Contamination of the soil.*— Pettenkofer holds that the poison is not eliminated in a condition capable of communicating the disease directly, but that it must first undergo changes in the soil, which changes are favored by the ground water.

"It does not seem probable that typhoid fever is communicated by the air alone, as by the medium of sewer gas."

Causes of Epidemics of Typhoid.

Probably the most careful investigation as to the cause of an epidemic of typhoid fever has been made recently under the direction of the State Board of Health of Massachusetts, that State having afforded to its Board of Health facilities and funds for the most careful sanitary researches. In the last report of that board, for 1892, the facts are given as to the investigations of certain epidemics of typhoid fever, and these are so instructive that I quote quite freely from that report, as follows:

Epidemic of typhoid fever at Lowell, 1890.— Results of an examination by Wm. T. Sedgwick, Ph. D., biologist of the board:

"The epidemic was confined to no special locality within the city. The cause, therefore, must be general and not local."

"Popular opinion attributed the trouble to the drinking water supplied by the city. It was also alleged that many victims of the disease had drunk no city water, but either no water at all or well water, or spring water. It was even denied by some that the prevalent disease was typhoid fever, and it was also asserted that 'many' of the cases reported as typhoid fever were really of 'some other disease,' or even non-existent. * * * Various local authorities were cited for all kinds of opinions regarding the cause of the trouble."

"There were five distinct systems of water supply in Lowell, two of which were obviously polluted by sewage within the limits of the city itself. The principal supply is the city water, drawn partly from a filter gallery, but chiefly, without purification, from the Merrimac river. The second and third systems are drawn from the Merrimac canal. The fourth is the supply from wells. The fifth is that of so-called spring waters, publicly sold for drinking purposes.

The canal waters were undoubtedly polluted by sewage and some canal water was certainly used for drinking by some persons.

Some well water was used for drinking, but principally in summer, and the use of well water for drinking purposes had been virtually given up for the season when the epidemic of typhoid was most severe, in November. In a few cases of typhoid fever, well water had been used. This was true, also, to a greater extent, as to canal water, but there yet remained a "notable epidemic among those who had not drunk either canal water or well water, but only the city water."

No evidence was found that the so-called spring waters had to do with the epidemic.

The milk supply of the city was fully investigated, with the conclusion that no evidence whatever was found to attribute the epidemic to infected milk.

The canal and the city water were both drawn from the Merrimac river, just above the dam and, as many cases of typhoid fever which occurred in Lowell after September 1, 1890, had no possible access to canal water, the cause of this wave of typhoid cases was sought above the point where the water was taken from the river. The very careful investigation of the officers of the State Board of Health of Massachusetts resulting in the determination that this wave of typhoid fever came entirely from four cases of typhoid, from which cases a brook was contaminated, which brook empties into the Merrimac river, about three miles above Lowell. The conclusion that a very decided epidemic of typhoid fever, extending to more than 550 cases, was caused by the infection by four cases of a stream, three miles above the city, was arrived at by the

officers of the State Board of Health of Massachusetts, after a very thorough investigation and discussion. Other possible causes of this epidemic were considered and dismissed during the investigation, and the conclusion was made positively and clearly. To the objection that the dilution would be so great as to render this contamination impossible the following statement is made:

"While we do not yet know the numbers of typhoid fever germs which one human intestine may throw off, we do know that of other germs it may discharge almost incalcuable numbers in a single dejection.

"The fact that probably only about 1,000 persons in Lowell, out of 78,000, suffered from the disease during the whole epidemic (the latter part of which I, also, believe to have been caused by secondary infection), while 77,000 escaped, certainly suggests a very dilute infectious material. But in the famous Red Hill and Caterham (Eng.) epidemic a few discharges from one person were apparently sufficient to produce an epidemic of 351 cases and twenty-one deaths from typhoid in a population less than one-fifth as large as that of Lowell; and from the bacteriological point of view there is in such cases in reality no difficulty."

Typhoid at Lawrence, 1890.— The city of Lawrence lies upon the Merrimac river, nine miles below Lowell, and that city was affected by typhoid fever directly afterwards. An investigation similar to that in Lowell was made, and the epidemic was traced to the public water supply drawn from the Merrimac river, from which the drinking water supply of Lawrence is drawn. A most important conclusion is given, in this connection, by the State Board of Health, as follows:

"An epidemic of nearly as great severity as that in Lowell occurred in Lawrence; and inasmuch as there is good reason to believe that this unusual epidemic was caused by the infection of the river at North Chelmsford and at Lowell, it is interesting to observe that some of the infectious material was apparently able to survive the comparatively unfavorable conditions imposed by the long and slow passage through the Lawrence reservoir and

the service pipes. It would seem, therefore, that while much of it must have perished enroute, some of it did not; and, as the time of year was November and December, we are safe in concluding that during these months, under certain conditions, some of the infectious material of typhoid fever may be conveyed nine miles by a river, may slowly travel through a distributing reservior, and still remain effective to a very dangerous extent if swallowed in 'drinking water.'"

The very interesting investigation of an epidemic of typhoid fever in Springfield, Mass., in 1892, is recorded in the same report of the Massachusetts State Board of Health above alluded to This investigation, however, resulted in the discovery that the only common point of connection between the cases of fever which occurred was that of taking milk from the same milkman, and the method of infection of that particular milk was, after an exhaustive search discovered.

Sanitary Situation at Cooperstown, Autumn and Winter, 1893-4.

This village has been for many years noticeable for its charming environment, its beautiful lake, its pleasant houses, its delightful summer climate, and, in fact, for substantially all the features which combine to make an attractive locality for permanent homes, and for a summer resort. The large number of families which make it their summer residence shows that these features are greatly appreciated. When, therefore, there occurs even the semblance of a condition of unhealthfulness, prompt action by the board, which has that department of public health in charge, is most praiseworthy. The suggestion that such a condition exists will always meet with opposition and objection. The experience at Lowell, as reported by the State Board of Health of Massachusetts, referred to in a previous page of this report, will generally be met with and probably has already occurred at Cooperstown. I quote again from that report:

"It was also alleged that many victims of the disease had drunk no city water at all, or well water, or spring water. It was even

denied by some that the prevalent disease was typhoid fever, and it was also asserted that many of the cases reported as typhoid fever were really of some other disease, or even non-existent. Various local authorities were cited for all kinds of opinions regarding the cause of the trouble."

The feeling indicated in this quotation has probably been manifested at Cooperstown. But the true way to secure a continuance of the prosperity of the village is in such action as will give to all who may enquire, an assurance that every reasonable precaution has been taken to preserve a healthy sanitary condition in every direction in which the uthorities of the village can properly act.

There existed a considerable prevelance of fever in Cooperstown during the autumn of 1893. The careful examination as to special cases, made by the Board of Health, referred to as above, resulted in a record of twenty-eight cases stated to be undoubtedly typhoid. Some of these cases occurred in houses connected with the sewers, others in houses not so connected, but in every one of the cases the lake water was used as pumped from the water works.

The following pertinent statements are from the authorities quoted above, in regard to the mode of conveyance of typhoid fever. "Infection of water is undoubtedly the most common mode of conveyance."* "Outside the body the bacilli (of typhoid) retain their vitality for weeks in water."*

"Filth, bad sewers or cesspools can not in themselves cause typhoid fever, but they furnish the conditions suitable for the preservation of the bacillus and possibly for its propagation."*

"A remarkable and unusual near infection of the water supply (of Lowell) was found to have occurred at such a time and in such a place as to account perfectly for the wave of typhoid fever which passed over the city."†

"Some of the infectious material was apparently able to survive the comparatively unfavorable conditions imposed by the long and slow passage through the Lawrence reservoir and service pipes. It would seem, therefore, that, while much of it must have

* Osler. † Report of the State Board of Health, Massachusetts, 1892.

perished en route, some of it did not; and as the time of year wa November and December we are safe in concluding that durin these months under certain conditions some of the infectiou material of typhoid fever may be conveyed nine miles by a river may slowly travel through a distributing reservoir and still re main effective to a very dangerous extent if swallowed in drink ing water."†

With this knowledge of the possibility of typhoid infection be ing conveyed in drinking water, and with the added knowledg that infection of water is undoubtedly the most common mode o conveyance, and with the important fact that all these recorde cases used the lake water from the water works, it seems of th first importance to determine whether there is a possibility tha the water thus provided for public use may have been polluted b sewage. If so polluted then there results not only a possibility but a strong probability, that in some of the sewage so pollutin this water there were germs of typhoid fever, which could thu be conveyed to the large number of persons using that water, wit the probable result of expanding to the character of an epidemi which might otherwise have been isolated and individual case

The original plans of the private company which constructe the water works doubtless were based upon the intention to dis tribute to all parts of the village the pure water of Otsego Lake The extension of the supply pipe out upon the bottom of the lak so that the water should be taken into it at a distance of 1,200 fee from the shore is an evidence of that intention. It shows als that the designers and builders of these works felt that a suppl of pure water could not be obtained from the lake nearer the shor because if they had supposed that pure water could have bee had near the shore the promoters of a private water compan would not have gone to the considerable expense of laying 1,20 feet of pipe, 10 inches in diameter, out into the lake, with a specia construction for its inlet in 35 feet depth of water. It is apparen too, that it was not thought that water fit for a public portabl supply could be obtained from the river at or near the dam, b cause if a suitable supply could have been so obtained, a privat

company would not have gone to the expense of 3,000 feet of 10 inch pipe, laid on the bed of the river from the lake to the dam.

As far as the present consideration of this subject is concerned, I assume that the water of the lake is pure and wholesome when free from contamination. I have no reason to believe otherwise. The lake is long and wide and at places very deep. Its water is probably an excellent one for public supply, when taken at a proper depth and at such location as to assure a constant normal condition. The present location of the inlet was probably well chosen and may still be a proper one, unless now affected by certain possibilities.

These possibilities are:

1. The existence of the large and beautiful cemetery upon the eastern shore of the lake, which cemetery extends considerably above and beyond the location of the inlet. This cemetery lies on a very steep hillside, which hillside slopes directly and quite regularly down to the lake. A public road forms the eastern boundary of the cemetery and the lake. This ground is full of water, like a wet sponge. The lower boundary of the cemetery is perhaps 20 or 25 feet above the lake, and the slope upwards in the cemetery continues steep. It is underlaid with rock, and, judging from a quarry excavation just north of the cemetery, and from general indications in the cemetery, the depth of soil to the rock is not great. The slope of the top of the rock is toward the lake, and the drainage of the whole cemetery is directly into the lake. The cemetery has a very large number of interments, and additions are constantly being made. It is well known that in the decomposition of human remains certain very active poisons, (ptomaines) are produced. Whether there is sufficient filtration through the ground to substantially retain and render harmless these poisons before they can be carried by the drainage water into the lake, can not be absolutely stated. I think it quite probable that the distance from the shore to the inlet supply pipe and the very moderate current caused by the inflow into that pipe, and the large dilution in the lake, may render the cemetery drainage of no special and immediate dangerous effect upon such water as enters

this pipe at its inlet. But I think that, should a new pipe be laid or new arrangements be made for a supply of water from the lake, it would be prudent to take the water from some point far enough north of the cemetery boundary to make future contamination from this source impossible. One further point in connection with the cemetery must be considered. Its drainage is directly into the lake, and with its drainage there may be carried elements dangerous to health. The constant current of the lake is towards and through the outlet, the Susquehanna river. Whatever poisons go into the lake from the cemetery or from sewage, or other deleterious discharges along the shore, are liable to be carried to and into the river. None of that river water should be distributed to the citizens with the public water supply.

2. Another consideration connected with the existing inlet and pipe along the bed of the lake is that they were laid more than twelve years ago. They were put together in winter, on the ice, and dropped to the bottom. The depth to the bottom varies from a few feet to over 30 feet. At the outer end the pipe was held above the bottom by a wooden construction and depended upon its own strength for support from that wooden framing to the point where it reached the lake bed. There must have been considerable strain at this part of the pipes. They may possibly be in as good condition as when they were laid, but that is hardly probable. I could find no assurance that the water which flows through the pipe certainly enters it entirely through the copper strainer hung from its extremity so long ago. There may be breaks in the pipe and some of the joints may be parted. There seems to be no means of easily and cheaply ascertaining its existing condition and I can not find that the expense necessary to secure this information had been undergone since the original construction. An affidavit of Mr. John Coleman, the person in immediate charge of the water works, states that at times water nearly ceases to run through the supply pipe. Only an examination of this pipe for its whole length and of the condition now existing at its outer end could give an assurance that it constantly conveys a supply of pure, unadulterated lake water.

From the lake shore at the river, the pipe extends to the pond and dam. This portion of the pipe is 3,000 feet long, it is 10 inches in diameter, and it lies upon the bed of the river. It has very many joints, all originally closed with rope yarn, or jute, and wooden wedges. Many of these wedges have disappeared. The water of the river can enter through these joints, and while a very considerable amount of water can not enter at a single joint, yet a very large amount can enter through the very many joints.

Even if there were no other means of connection between the polluted water of the river and the service pipes in the village, I would recommend that dependence should no longer be placed upon a pipe system such as now exists for the supply of water for household use. It constantly invites the entry of the dangerous water of the river and the lake shore, and is a menace to health.

At the pumping station there is a direct connection between the river and the well from which all the village supply is pumped. There are two pipes which make the connection, as described in a previous page of this report. The upper, or vitrified pipe, I am assured, has not been used since the lower, or iron, connection was put in. This latter was put in place, so it is stated by Mr. John Coleman, before August, 1891. By opening the valve, whose handle is in the pump house, a free connection is established between the river and the well, and then the river water is pumped directly into the village pipes which supply all the water used in the village service. Mr. Coleman states that this valve is opened when the supply through the pipe from the lake nearby ceases to run. He states that this connection was opened once in July, 1893, and once in August, 1893.

At these times, at least, if at no other times, river water was pumped into the mains and delivered to all the houses connected with the village supply. If at any time not long before this occurrence, the dejecta from any typhoid patient was in the river, then the remarkable facts quoted previously show that the germs of that fever could assuredly be communicated to persons using the water for drinking, and that an epidemic might easily follow.

The period of incubation of the disease is about two weeks, and a number of the recorded cases developed at about that period after the times Mr. Coleman states the connection was opened. The cases were scattered, and not confined to one locality, and hence could not be due to purely local causes. The general sanitary conditions were good at the houses where the cases occurred. All the persons affected used the water from the pumped supply. The river water certainly had sewage in it, as shown previously. In my opinion, there is every reason to feel that the introduction of this river water into the public supply has been wrong, and that a continuance of such introduction is a constant danger.

The cross-pipe was, as stated by Mr. Coleman, put in about two years ago. The health officer states that before that time, for several years, there was no typhoid fever, except an occasional case brought from other places. Directly afterwards there was a number of cases, and this year a much greater number.

The pipe which is laid to supply water from the lake to the well at the pump house is 4,200 feet long, and 10 inches in diameter. The force which impels the water through this pipe is gravity and depends upon the head upon the pipe. The greatest head which would exist would be 4.34 feet, and this would be when the pond is full up to the level of the flush boards which are used at times to raise the water above the crest of the dam.

With a perfectly smooth pipe, clean in the interior and without sharp curves, there might pass through this pipe, with this head, about 50 cubic feet per minute, or 540,000 gallons each 24 hours. Any obstructions or impediments in the pipe would at once materially reduce this quantity.

Mr. Lamb states that the pumps are now delivering from 400,000 to 450,000 gallons every twenty-four hours. It will be seen that the maximum amount that can flow through the pipe from the lake, when the water is high, is not very greatly in excess of the amount which it is stated is now pumped. When the water is lower in the lake the flow in the pipe to the well must be much decreased, and the ease and facility with which the communication from the pond can be made must be a constant temptation to

draw upon it in order that a stead supply may be maintained in the village pipes.

I am informed also that new pipes are being laid in the village streets, and that the number of connections is constantly on the increase. I doubt whether it will be possible to depend upon this 10-inch supply pipe, as now laid, for a supply for this village very much longer, and unless the supply directly from the river by means of the cross-pipe to the well should be used, there doubtless will be a deficiency in the amount of water delivered to the well for pumping. I do not understand that it is the province of the engineer who is consulted by your board to tender professional advice to the company which owns the water works, and therefore I do not go into the question as to the means of securing a supply of pure water to the village mains. In fact, a careful study should be given to this particular subject before an engineering opinion as to its details could properly be advanced, but I am quite willing to say that some change should be made so as to secure both the quantity and quality of water required.

An examination was made of the water delivered at various parts of the village, from the pumping station. Samples were taken from a number of hydrants and from the faucets in a number of houses. The effluent from the hydrants was discolored and had much organic matter, some actively alive, some jelly-like masses, and considerable particles resembling the small roots of plants. The odor at some of the hydrants was quite offensive. It is only fair to say that, unless hydrants are frequently opened, there is apt to be an accumulation of such substances as exist in the water and this accumulation renders the discharge more offensive than would be the case at a tap which was often opened. But such accumulation is instructive, as it shows plainly that foreign substances are delivered with the water.

The water drawn from faucets in the houses showed, when collected in a bottle and when strained through a cloth, the same characteristics as the water drawn from the hydrants.

The amount of foreign matter in the daily supply of water seems to prove that the arrangements for delivering pure lake water are not perfect. I examined water which was taken from the lake,

well away from the shore. It was clear and clean, while that delivered through the pipes was not. As indicated previously, a more detailed examination may be required to determine what is the reason for this. It may be that there is more or less mixture of river water in the pipe supply, introduced in one or another of the ways suggested above. It way be that the lake water enters the supply pipe at or near its end in the lake, not through the strainer hanging in clear water, as was intended, but by some other openings. The wooden construction at the end of the pipe may have fallen, and the end of the pipe may be on the bed of the lake among the weeds and water growths. The circumstances, in my opinion, require such examination as will determine these matters or else an entire change in the method of supplying pure water. The latter is the safer course.

A chemical analysis of the water delivered through the pipes is interesting, but an analysis of a single sample of water is of little service in determining the general characteristics of a public water supply. In this connection the following quotation from a paper by Dr. Thomas M. Drown, Chemist of the State Board of Health of Massachusetts* is pertinent:

"A single determination in a chemical analysis of a water can not tell us what the real condition of the water is; and one complete analysis tells us only what was the condition of the water when the sample was taken."

I have thus endeavored to present as concisely as possible the results of an examination made for you during the fall of 1893. It seems only proper that I should add as a fair deduction from all these circumstances, that it seems to me there is every reason why Cooperstown should be an entirely healthful locality as soon as the necessary sanitary measures are taken, as indicated above, together with those other measures which were in progress under the direction of the Board of Health at the time of my visit, and which therefore need not be here described.

Respectfully,

JOHN BOGART,

Consulting Engineer.

* Report of the State Board of Health of Massachusetts, 1889.

NOTE.— It is proper to add that the recommendations made in this report in reference to the improvement of the water supply have been fully complied with. New supply pipes of ample capacity have been laid from a point further up the lake. A new and deep receiving cistern has been built and all connection with the river has been cut off.

WAVERLY.

Disposal of Sewage.

The system consists of a retaining basin at the discharge end of the Broad street sewer, and the accompanying map gives a general ground and elevation view, minor details not shown. The system includes an automatic flow of disinfectants, and sediment treatment at some proper point in the length of the sewers, which is retained in the basin and the clear liquid allowed to escape over the overflow wall or spill, into Cayuta creek; the spillway to have ample flow without disturbing the settling contents of the basin.

This continues until a flood in the creek of sufficient volume bursts open the gate, and the sediment and refuse contents of the basin is swept clean and carried by the flood into the Susquehanna river some two miles below.

When the flood subsides below the spillway, the gate is closed until another flood occurs to carry away the contents of the basin.

In some proper places an electric indicator will show when the flood is up and the gate is open, and also when the flood has subsided below the spillway, so that the gate can be closed. The present average flow in the sewer at the discharge end is three and a half inches deep, and the contingency for a larger disposal seems so remote, and as new and improved methods are continually developing, a more improved disposal plan may safely be left for future action.

The high flood extreme is about five feet above low water mark. Below is a copy taken from the last full year's record, made by the United States weather observer at this village, with the dates of maximum heights and those of over 15 inches, only, given. The figures over the dates give the maximum heights in feet.

January 15th, 3 16th, 30th.

February 8th, 16th, 3½ 17th, 3 26th.

March 13th, 3 14th, 22d, 4 23d.

April 5th, 3½ 9th.

May 1st, 4 6th, 4 14th, 4 20th, 2½ 27th.

June 5 6th, 25th.

July 15th, 17th.

August 3d, 10th, 27th.

September 4½ 10th, 3 13th, 3 18th.

October 7th, 5 20th, 24th.

November 18.

To the Honorable, the Sewer Commissioners of the Village of Liberty, N. Y.:

Gentlemen.— Previous to and while making such surevys of Liberty as were required in the planning a sewer system, we met with you and discussed the various "systems of sewers," and, after careful consideration, you wisely, we believe, decided upon the "separate system" as the type best suited to your requirements, and, in addition, determined that the sewage should be purified by "downward intermittent filtration" before permitting it to be discharged into the neighboring water-courses.

In entire accord with these determinations, we have prepared, and now have the honor to present, maps and plans for such system. The various maps and plans are as follows, viz.:

A.— Map of the village of Liberty, N. Y.

B.— Profiles of the streets, sewers, etc.

C.— Plan of filter-beds.

D.— Plan of settling-chambers and building.

E.— Plan of distributing-wells and outlets.

F.— Plan of iron gate for chambers and wells.

G.— Plan of man-holes, flush-tanks, etc.

H.— Specifications for the construction of the system.

I.— Blank form of proposal.

J.— Instructions to contractors.

The map of the village of Liberty shows the corporation limits, the contours of elevation (the elevations being those above mean sea level). It shows the open and accepted streets, and, in addition, a number of streets and avenues which, we are informed, have been opened and dedicated to public use by the owners of abutting lands, and which we believe will be accepted by the village authorities at the proper time. The map also shows most of the dwellings, churches, hotels and business houses, and the streams intersecting the village. Upon the map we have also indicated the position of the fire hydrants, as well as the sewers, man-holes, flush-tanks, etc. The location of the line of road, and of the depots of the New York, Ontario and Western Railroad are given on the map. The filter-beds are also shown outside of the corporate limits of the village, and adjacent to Mongaup river.

The profiles show the surface of the streets and avenues, sewers, their sizes, their rate of fall or inclination, the elevations at all flush-tanks, man-holes, and all breaks or changes in grades. All sewers are 8 inches in diameter, unless otherwise shown on the maps and profiles.

Upon the plan of filter-beds are indicated the "settling chambers and building," the various "distributing wells and outlets," the "carriers," "under-drains," etc. The elevations of each bed and of the main embankments are given. Although we have shown on the plans 18 beds, we do not believe it will be necessary to build beds 15 to 18, inclusive, for some time. The land, however, should be secured at the present time.

The plans of the "settling-chambers and house" give half-plan, half-horizontal section, longitudinal section, side elevation, half end elevation, and half cross-section of settling-chambers and building, and their relation to the distributing-wells, carriers, outlets, etc.

On the plan of "distributing-wells," "outlets," etc., are given all dimensions for their construction. The wells and outlets are to be built of brick and concrete. The wells have iron gates to control the flow of sewage, and have wooden covers. The outlets have spillways paved with blocks in such manner as to distribute the sewage in a thin sheet upon the surface of the beds, instead of a stream, which will cut gullies in the beds.

A large scale drawing of iron gate to control the flow of sewage in settling chambers and distributing wells is given.

The plan of the various man-holes, flush-tanks, etc., shows clearly their form and dimensions. The man-holes and flush-tanks will be located at the points shown on the map, the former at street intersections and at such other points as may be considered necessary by the sewer commissioners, and the latter at the head of the upper end of lateral sewers. In one or two cases flush-tanks will be located at the upper end of that portion of the sewer which may be built now, and when the sewer be extended, the siphon can be taken out and built farther along at the upper end of the extension, and the abandoned flush-tank chamber be converted into a man-hole.

We also present specifications for the construction of the system, and blank form of proposal, and instructions to contractors.

It will be observed, on referring to the map, that the sewage of all that portion of Liberty lying west of Liberty street, and north of the small street lying south of Lake avenue, and between the New York, Ontario and Western Railroad and Liberty street, passes into and through Church street southeasterly to Buckly brook, and thence southerly to Mill street, and thence down Mill street and across private lands to the filter-beds. The sewage of

ınd Grant streets must also be conveyed across private
r from School street, near Buckley brook, to Maple street.
nputing the sizes of the main and outlet sewers, we have
l that there will be, on an average, 25 persons tributary to
) feet of sewer, and that the average volume of sewage for
rson will be 80 gallons per day, 80 per cent. of which will
ough the sewer in twelve hours. A small amount of roof-
as been allowed for in our computations also.
erewith give an estimate of the cost of building so much
ystem as it is proposed to construct at the present time,

eet sewer, 8-inch diameter, 17,590 feet, at 45	$7,913 25
eet sewer, 9-inch diameter, 1,360 feet, at 50	680 00
eet sewer, 10-inch diameter, 526 feet, at 55	289 30
eet sewer, 15-inch diameter, 2,800 feet, at 90	2,520 00
eet sewer, 18-inch diameter, 850 feet at $1...	850 00
two man-holes, at $30.....	660 00
rop man-holes, at $40.....	280 00
en flush-tanks, at $80.....	1,360 00
ırds rock excavation, 4,000, at $1.....	4,000 00
-chambers, etc.....	1,500 00
eds, 1 to 14, inclusive.....	7,800 00
ımages, etc.....	1,500 00
xpenses, engineering contingencies, etc., 10 nt.....	2,935 25
al cost.....	$32,287 80

Respectfully submitted,

COLIN R. WISE,

ROBERT M. WATSON,

Engineers, etc.

IC, N. J., *September* 6, 1895.

WESTPORT.

System of Sewers.

PORTLAND, ME.

To Miss ALICE LEE, *et al.*, *Westport, N. Y.:*

We respectfully submit the following report of a sewer system for your village, accompanied with plans, profiles and specifications.

The one general water-shed is into Lake Champlain, and this is divided by Hammond brook, making two outfalls. These we have designated as the northern and southern divisions. From the topography shown by the contour lines of 3 feet difference of elevation, the water-shed is rapid both to the lake and Hammond brook, and we have therefore treated a separate system as best adapted for your village.

The nature of the road material is such that the sharp inclines cause but little damage from heavy showers, and in a few cases, should culvert and gutter paving be built and laid, the expense of carrying the surface flow and the maintenance of roads could be reduced to a minimum cost.

Your village being supplied from one source with abundant and pure spring water, at an elevation of 487 feet above the lake, give ample provision and quantity for proper flushing of sewers. It is therefore improbable that a supply for potable uses will ever be taken from the lake in this section.

Northern Division.

The northern division commences at the summit north of the Delaware and Hudson Canal Company Railroad depot on Main street, and has its outfall south of Payne's dock, 550 feet from the shore line in 8 feet of water. This section has Main, Park, North and South streets and Marks street, all north of Hammond brook.

Due to the quick grades per 100 feet, the pipes have a capacity

for additional laterals on the possible growth for the future between Main and Park streets. The abutting land on Main street is the western limit of the water-shed to the east, and in some cases the fall is so sharp west of the street to Hammond brook that only the eastern side can be built upon, and for your village which seems to tend, from year to year, to a growth of summer population, calling for large lots, we have concluded that forty persons per 100 feet and 60 gallons per person, is sufficient for a probable growth in the future.

This separate system is intended to receive the sewage from sinks and water-closets, and no surface water or under drains are to enter them. They are calculated to discharge the twenty-four hours' sewage in sixteen hours' time, running one-half full.

Southern Division.

This contains Main street south of Hammond's brook, Lake and Lee streets, and discharges into the outfall sewer south of Lee's wharf, in 10 feet of water. A portion of this division is at present relieved by a private sewer running easterly to the lake from a point about 100 feet easterly from Howells street, shown by dotted lines on the plan and marked old sewer. We should extend this one to Howells street, connecting with Main, so as to carry the sewage to the outfall.

Outfalls.

To be of castiron pipe, 8-inch, at Payne's dock, and 6-inch, at Lee's wharf, the outer ends to lie in 8 feet and 10 feet of water, respectively.

We have made shallow digging, except in a few cases, as there is no trouble from wet cellars, the sharp inclines being favorable for scour with light flows.

Flush Tanks.

Flush tanks, to be placed at each end of Main street, to have a capacity of 150 gallons and to discharge once in every twenty-four hours' time. At junction of Main and Park streets, on Main, provisions are made for flushing.

Man-holes, Etc.

Man and flush-holes are placed at changes of grade and direction, except when the grades are very sharp and, in our opinion, do not require them.

The section lying between the junction of Main, North and South streets, and Main street A station 32, can be taken to the outfall sewer at Payne's dock.

We have prepared the following estimate of cost:

Six-inch vitrified sewer pipe, 16,988 feet, laid.....	$7,451 63
Six-inch castiron sewer pipe, 150 feet, laid.....	123 00
Eight-inch castiron sewer pipe, 650 feet, laid.....	682 50
Fourteen man-holes, at $32.....	448 00
Twelve lamp-holes, at $10.....	120 00
Two flush-tanks, at $55.....	110 00
Engineering, superintendence and contingencies, 3.21 miles, at $400	1,284 00
Total.....	$10,219 13

Respectfully submitted,

ILSLEY & CUMMINGS,

Engineers.

FAR ROCKAWAY.

System of Sewers.

137 BROADWAY, NEW YORK, *June* 6, 1895.

To the President and Board of Sewer Commissioners, Far Rockaway, Long Island, N. Y.:

Gentlemen.— In accordance with clause 5 of my agreement with your board, dated April 23, 1895, in which I agree "to prepare a report setting forth the reasons for the adoption of each particular feature of the system, and to recommend the best system of sewage purification and disposal, and to prepare complete

plans and specifications therefor, which shall be acceptable to the State Board of Health," I beg leave to present this report.

It is well known that many plans have been previously prepared for sewering and disposing of the sewage of Far Rockaway which the people have rejected. The reasons for the objection of these plans need not be gone into here. Suffice it to say that some good cause must have existed in the minds of the taxpayers to warrant their action, as they are generally in favor of sewerage when the scheme presented to them is efficient and the most economical that can be adopted under the circumstances.

That sewage disposal works are necessary for Far Rockaway has been so clearly set forth in previous reports and discussions that the writer is scarcely required to consume further time in advancing additional arguments in favor of such works. It will be his province, therefore, to design and recommend a system which will best subserve the interests of the village and shall not contain the objectionable features supposed to exist in the preceding designs.

On account of the character of the excavation in your village, it is desirable to avoid, to as great an extent as possible, any excessive cuts in the laying of the sewers. It has therefore been the writer's object to devise some scheme in which the average depth of cut would be less than 8 feet. Beyond this depth the rate of increase in the cost is very great.

It is well known that Far Rockaway, at the center of the village, lies on the summit of a hill and the ground falls in all directions from this ridge.

On account of the flatness of the ground, it is absolutely impossible, by natural flow, to bring the sewage from all parts of the village to a common outlet without designing the main intercepting sewer much below low water-mark and with excessive cutting.

Under these circumstances, to bring the sewage to a common outlet, it is necessary that mechanical power be adopted. The method which first suggests itself is that of steam pumping, but the maintenance of four steam-pumping plants would cost more

than a village of the size of Far Rockaway would be warranted in spending.

The next method which received consideration was that of the "Shone System," a patented process of forcing sewage collected at substations to a main station, the motive power being compressed air. This system has given satisfactory results in other places.

As this Shone system is a patented device, the cost of the right to use it in Far Rockaway would be considerable. This charge, together with the expense of introducing it into your village, would be greater than other non-patented and equally successful methods which can be employed.

The writer has devised another method of economically conveying all the sewage to a common point, and at a cost which would not be prohibitory. This is done in the following way:

The village is divided into four districts, and, as far as the sewers in each district are concerned, they are treated as so many separate systems.

At the point to which the sewage of each district is conveyed, is located a tank, from which the sewage is pumped by means of an electric motor and power-pump, which derives its motive force from a dynamo located and operated at a central station. The sewage is forced from each of these substations into one of the sewers of the main district, in which is located the central power station which it is proposed to construct in the Inwood boulevard, about 600 feet from Carleton street. The sewage from these substations is not forced directly into the main collecting tank, but is simply conveyed to the crest of the hill in a castiron pipe, and flows from there by gravity into the district at the lowest point of which is located the central power and pumping station. The size of the castiron pipes, being under pressure, need only be 6 inches.

The sewage collecting from the four districts at this point is then pumped to the sewage disposal grounds at Healey's farm. This ground was selected on account of the character of the material found there, but if there should be any difficulty in

making arrangements with the owners of this lot, it is an easy matter to purchase another lot in that vicinity which will answer the same purpose.

On account of dividing the village into four districts, the amount of sewage flowing in each district is limited, which permits of the use of 8-inch pipe for the largest part of the work. Seven-eighths of the entire system being constructed of this size, of course this involves minimum expenditure on this portion of the work.

Before taking up the question of sewage disposal I will complete the description of the works designed for handling the sewage from the time it enters the pipe until it reaches the disposal grounds.

The central power and pumping station consists of an engine room, 34 feet by 43 feet; a boiler room, 26 feet by 29½ feet; coal room, 15 feet by 19 feet; office, 11½ feet by 12 feet; vestibule, 7 feet by 11 feet; and also tank for collecting the sewage from the substations, which will hold 100,000 gallons, as it is advisable to get the sewage onto the disposal grounds as soon after it reaches the sewers as possible. Much sickness has resulted and does result from the fact that this sewage matter is held back long enough to permit it to putrefy and become decomposed. This fact holds equally as well with the waste from the kitchen sinks as with foecal matter. The size of the tank, therefore, compels pumping for a certain number of hours each day, but not necessarily continuous.

The substations consist each of a small brick building, 22 feet by 10 feet, with tank 30 feet in diameter, for the collection of sewage of the district. These tanks are so arranged in size that the draw from them will be proportional to the draw from the tank at the main pumping station. The pump at these substations has a capacity varying from 200 to 250 gallons per minute, and they are propelled by an electric motor of 12½ horse power each. These small substations will be constructed after a substantial design and will add rather than detract from the appearance of those parts of the village in which it is proposed to construct them.

The main pumping station, as you will readily see, is designed to have a pleasing effect, and will also be a point of interest in your village. We have considered that in the construction of these buildings which are put up for the handling of a substance which is usually considered offensive, no care should be spared in having the outward appearance, at least, as attractive as possible, and not to appear in the eyes of the people as nuisances.

In the main pumping station are located two pumping engines of 1,000,000 gallons capacity each, which pump the sewage collected from the substations onto the disposal grounds. In this station is also located a Corliss engine of fifty horse power; also two dynamos, which furnish power to the electrical motors which run the pumps at the different substations. The size of the iron pipe leading from the main pumping station to the disposal grounds has been designed to be 10 inches. Not that this size is absolutely necessary, but from the fact that unquestionably Arverne, Newbern, Inwood and Lawrence will be compelled to sewer into your system.

It will be seen that every portion of the village can be connected with the sewers. The station in district " C " has been so located that Wave Crest, which is already sewered, can be connected directly thereto. The sewers in Wave Crest have not been shown on the map because no plan showing their location could be obtained.

Flush tanks have been designed on all dead ends because, in Far Rockaway, they are necessary on account of the very flat grade which we were compelled to adopt.

Man-holes are located at all the sewer ends of sections, and generally spaced between 300 and 400 feet apart, throughout the entire system.

Much of the sewering shown on the map, and included in the estimate, can be omitted for the present, because the streets are not built up, and consequently no sewerage is needed thereon. However, it was necessary, in order to have a complete design, to show sewers on all streets.

The question of the best method of sewage disposal is the next one that compels the attention of the writer.

The methods in vogue in this country, for the disposal of sewage, may be classified generally as:

(1) Chemical precipitation.

(2) Broad irrigation.

(3) Intermittent filtration.

In many plants a combination is made of chemical precipitation with either irrigaton or filtration.

The object to be attained is the same, whatever method of treatment is contemplated, namely: The complete removal of the organic matter in solution or suspension, together with the contained bacteria, and the rendering of the effluent free from all impurities that become a menace to the health of the community.

Chemical precipitation consists, briefly, in adding certain chemicals to the sewage tanks, whereby an inorganic precipitate is found, which settles to the bottom of the tank. The substances best adapted, and more generally used as precipitants, are salts of aluminum and iron and lime. Many villages, in adopting chemical precipitation, have attempted to realize from the sale of the precipitate or sludge, a sufficient revenue to maintain the cost of running the plant, but it is an acknowledged fact that in the process of precipitation, a large proportion of the fertilizing properties of the sludge are destroyed, thus rendering it of little value as a manurial product. Hence, the failure to obtain a revenue from this source.

It is useless, therefore, to attempt to make a money-making concern out of a sewage disposal plant, but rather by economic working and efficient management, to endeavor to keep down the operating expenses as low as possible consistent with a satisfactory result at the outfall.

It will be readily understood that chemical precipitation is a very expensive method to adopt, both as regards first outlay and annual operating expenses. Since results equally as satisfactory can be obtained at a less expense by other methods, I am led to decide against chemical precipitation for your village. I will, however, refer you for literature on this subject to Colonel Waring's book on "Modern Methods of Sewage Disposal," and "Sewage

Disposal in the United States" by Rafter and Baker. These gentlemen have made exhaustive studies of this subject, and have unquestionably come to the conclusion that chemical precipitation should only be employed when other methods can not be used.

Broad irrigation treatment requires considerably more land to dispose of a given amount of sewage than does filtration, and, as the character of the ground at our disposal is better adapted for intermittent filtration, I recommend that that method be adopted.

On the detail sheets are shown plans and sections of the disposal ground, with its accessories. These plans are general in their character, and may be modified somewhat when your board have secured the land for this purpose. The system of purification may be described as the passage of sewage through beds of gravel and sand, during which passage oxidation of the organic matter takes place, together with the destruction of a large part of the bacteria. This oxidation and removal of germs, both harmful and harmless, may be carried to any degree of thoroughness desired, by proper selection of the filtering material, and by regulating the quantity of sewage applied to a given area. The results of the exhaustive experiments at Lawrence, Mass., published in the report of the Massachusetts State Board of Health, indicate that 60,000 gallons of sewage may be filtered daily per acre for an indefinite time with material similar to ours, and a much larger quantity if used intermittently, as designed. The result will be a clear effluent containing from 1 to 3 per cent. as much organic matter as in the sewage, and an almost complete destruction of the bacteria. The ground is laid out in sand and gravel beds 200 feet by 200 feet, and is so arranged as to admit of being used intermittently. We can feel assured, therefore, that the effluent can be made much purer and cleaner than the water of Jamaica Bay, and, in fact, than many drinking water supplies.

If these plans are approved by the State Board of Health, and by your board, then no time should be lost in calling a public meeting of the citizens to openly discuss this question, and have the

board of trustees call an election for the purpose of submitting the question as to whether or not you shall adopt this system, and whether or not you will be permitted to raise money to construct the system as outlined by me.

The estimated cost of the entire system to provide sewerage for every house in the village, as shown on accompanying plans and drawings, is $80,000, and contemplates the construction of—

Lineal feet of 8-inch pipe sewers, 67,295.
Lineal feet of 10-inch pipe sewers, 14,845.
Lineal feet of 12-inch pipe sewers, 7,575.
Lineal feet of 15-inch pipe sewers, 1,130.
Lineal feet of 18-inch pipe sewers, 800.
One hundred and sixty man-holes.
Forty-five flushing tanks.
Pumping stations and appurtenances.
Disposal grounds.

The operating expenses, including coal and labor for the pumping-station, sub-pumping stations, and also for the care of the disposal grounds should not exceed $4,000 per annum.

Yours respectfully,
ALEXANDER POTTER.

MECHANICVILLE.

Extension of Sewerage.

ENGINEER'S REPORT ON MECHANICVILLE, N. Y., SEWER SYSTEM, ACCOMPANYING MAPS, ETC., REQUESTING APPROVAL OF EXTENSIONS TO PLANS APPROVED JUNE 28, 1892, BY THE STATE BOARD OF HEALTH, AS REQUIRED BY CHAPTER 375 OF THE LAWS OF 1889.

State Board of Health, Albany, N. Y.:

Gentlemen.—The sewer commissioners of the village of Mechanicville, N. Y., having decided to place the matter of the construction of a system of sewers for the built-up portion of said

village, before the people, for their vote upon the same, have thought best to ask your approval of the extended plan, herewith submitted, in order that any portion now built may provide for the sewering of the territory, which will eventually be tributary thereto. In order to accomplish this result some changes in location, size and grade of the sewers heretofore adopted, has been advisable. These are set forth on the plans and profiles by a distinction in color and may easily be recognized. The principal change proposed in the lowering of a portion of the system west of the canal, and especially lowering the canal crossings, so that the sewers shall be at least 3 feet under the bottom of the canal. Many of the new streets shown in the western portion of the village have been opened and graded since the designing of the system of sewerage adopted in 1892, and the village has also since that time built a system of waterworks, the distribution of which extends as far west as Fifth avenue, and practically covers the entire portion of the village, which it is now proposed to sewer, so that adequate means of flushing the sewers will be at hand. The construction of the waterworks has also made it advisable to lower the sewer grades to some extent to avoid the water pipes. This lowering has been carried back from the hill portion of the village, so that the gradients of the flat sewers have not been affected and the sewers have been designed to flow not more than half full, with a minimum velocity of 2½ feet per second.

M. R. SHERRERD.
Engineer.

CHARLOTTE.

Changes in Sewers.

CHARLOTTE, *April* 25, 1895.

To the Honorable the Board of Health of the State of New York:

Gentlemen.— The accompanying plans which are hereby submitted to you for approval show the changes proposed in the

sewerage system, which is now in course of construction, the maps and plans of which are on file in your office.

The proposed change from Lake avenue to Ontario and Grace streets is considered advisable, as Lake avenue is private property as well as lying outside of the corporation. It would make it necessary to run the house laterals through private property, thus making another complication; hence the change.

The change proposed from Allen Park to a point about 50 feet inside of the village line and parallel thereto was considered best, as this property lying outside of the village line, while laid out, was still farming land and not likely to be built up for some time, and as the money which would be expended there can be used to far greater advantage elsewhere, it was deemed better policy than to expend it where it would be of no practical use for several years; the size of pipes and grades, remaining practically the same, so that the sewers can be extended, if it ever becomes necessary to do so, without in any way interfering with the efficiency of the portion already constructed.

Yours respectfully,

LE GRAND BROWN,

Engineer.

PELHAM MANOR, WESTCHESTER COUNTY.

Changes in Sewer Lines.

50 WALL STREET, NEW YORK, *March* 27, 1895.

Hon. C. W. ADAMS, *State Engineer, Albany, N. Y.:*

Dear Sir.— The plans for the sewerage of the village of Pelham Manor were approved by the State Board of Health, June 29, 1894, after examination and recommendation by me. The sewer commissioners of that village now desire to make a few modifications in the plan, shown by accompanying map. I have examined

these modifications, which are very small, and find they are improvements, and I recommend that they be approved.

Truly yours,

JOHN BOGART,

Consulting Engineer.

Sewerage of Pelham Manor.

PROPOSED CHANGES FROM PLAN APPROVED BY THE STATE BOARD OF HEALTH JUNE 29, 1894.

These changes are unimportant modifications of the lines as follows:

1. At junction of Prospect avenue and Esplanade, the sewer to be put in the street instead of across private property.

2. On east side of Pelhamdale avenue between Black street and Boston turnpike, the sewer to be put in the street instead of across private property.

3. At Pelhamdale avenue near Terrace avenue, the sewer in private property to be omitted.

4. A new street, Lewis street, has been laid out since the submission of the former plan. A sewer to be put through this street, and the sewer in Esplanade, between Boston turnpike and Lewis street, to be omitted.

5. Between Manor lane and Wolf's lane, the line of sewer through land of H. C. Iden to be improved by slight change of location.

CHATEAUGAY.

Plans For Sewerage.

State Board of Health, Albany, N. Y.:

Gentlemen.— In pursuance of a resolution passed by the trustees of the village of Chateaugay, Franklin county, N. Y., I submit

the following plans and specifications for a system of sewerage of said village for your consideration and approval, with the following brief description of the village:

Chateaugay village is situated on a slope of land, with Marble river to the north and east, and Chateaugay river to the west, and two brooks running through a small part of the village. It is a village of about 1,000 inhabitants, and slow growth, with the Odgensburg and Lake Champlain railroad that runs just south of the center of the village.

The incorporated limits include an area of one square mile, with clay loam soil.

The contour of the ground is such that the main portion of the village will have to sewer into Marble river, and the western portion toward Chateaugay river. The object of running the sewer into Bailey brook is to save a rock cut that would have to be made on a steep side hill, in order to go direct to Chateaugay river.

The village is well supplied with water from a large spring with over 100 foot head, with water-pipes in all of the principal streets, with an abundant supply of water.

There are now several closets that run into a covered ditch on Depot street, that crosses Main street to River street, and is covered down River street about 600 feet, and then runs in an open ditch by the side of the street to the east fork of Bailey brook, which shows the great need of a system of sewers.

ALBERT MAN,
Civil Engineer.

HASTINGS-ON-HUDSON.

Plans For Additional Sewers.

YONKERS, N. Y., *January* 22, 1895.

To the Honorable the State Board of Health of the State of New York:

Gentlemen.— In October last your board approved the general plans and specifications for a sewerage system for the village of Hastings-on-Hudson, and detail plans for sewers then proposed

to be built at once. Since then the board of sewer commissione of said village has decided to construct additional sewers, and sires your approval of the plans for said additional sewers, a also of two alternate plans for portions of the same.

The additional sewers proposed to be built at once are sho on the accompanying plans, as are also the alternate plans. T alternate plans are marked "A" and "B." The one marked "A provides for carrying the sewers from North Broadway to C stant street, and thence to Huebner's lane, and through Heubne lane to Maple street, instead of through Tower lane, which private property, from North Broadway to Maple street. T one marked "B" provides for carrying the short sewer in No Broadway, north of Main street, south to Main street, instead through the Chrystie lands, along the brook, from North Bro way to Main street.

The original plans, through Tower lane and the Chrystie lan were selected for economy in construction; but, inasmuch as t commission fears opposition and increased expense and delay securing the property rights and easements necessary, it desi your approval of the alternate plans submitted herewith. T commission desires to be free to adopt either the original or alternate plans, as it finds expedient later on.

Your board, when in session at the Murray Hill Hotel, on S tember 20 last, authorized your secretary to affix the approv clause to our plans when they had been approved by the St Engineer. If that authorization can be made to cover the ad tional and alternate plans now presented, we will be grea obliged if you will have them acted upon promptly, so that can proceed at once with the actual work.

Respectfully,

S. L. COOPER,

Engineer Hastings-on-Hudson Sewer Commission

Investigations by Order of the Governor.

INVESTIGATIONS.

STATE OF NEW YORK:

EXECUTIVE CHAMBER.

To the State Board of Health:

I have been presented with a petition signed by numerous residents of the city of Buffalo and town of Cheektowaga, Erie county, stating that on William street, in the said town of Cheektowaga, there are numerous establishments carrying on the business of rendering dead animals and engaged in other transactions that create a public nuisance and menace to the health and comfort of the people residing in that vicinity and the persons compelled to travel in or near said city, and further stating that various citizens have been made sick, and that life and health in that locality have been affected in consequence of the alleged grievances set forth in the petition.

I therefore require you, in accordance with the provisions of section 6 of article 1, of the Public Health Law, to make an examination into the alleged nuisances and questions affecting the security of life and health in the locality aforesaid, and to report the result thereof to me on or before the first day of September, 1895.

LEVI P. MORTON,

[L. S.] *Governor.*

Dated at the Capitol at Albany, this 17th day of July, 1895.

CHEEKTOWAGA NUISANCES.

To His Excellency, HON. LEVI P. MORTON, *Governor of the State of New York, Albany, N. Y.:*

The petition of the undersigned residents of and owners of property in the city of Buffalo, and town of Cheektowaga, in the county of Erie and State of New York, respectfully shows, as follows:

That on William street, just outside the limits of the city of Buffalo, in the town of Cheektowaga, there are several establishments carrying on the business of rendering dead animals and slaughter-house scrap, cremating garbage, bone-boiling, manufacturing sulphuric acid and fertilizers, etc.

That the vile stenches emanating from these establishments are a menace to the health, comfort and prosperity of your petitioners and all others who have to come in contact therewith.

That William street is one of the principal thoroughfares leading from the city of Buffalo into the adjacent country, and not only the residents of the immediate neighborhood, but every one passing from the city into the country, and vice versa, as well as the public traveling on the railroads running near the establishments in question, are obliged to inhale the abominable stenches arising from the works in question.

That the city of Buffalo has extended very greatly, within the last few years, in the direction of the works referred to, and is still extending in that direction, and the population increases the number of people suffering from the effects of the smells increases.

That the stenches emitted from the said works are so vile that doors and windows have to be closed in hot weather, and even with these precautions citizens are afflicted and made sick as the obnoxious fumes permeate the entire atmosphere.

That in consequence of the stenches referred to, property in the neighborhood of the establishments is depreciated in value and rendered unsalable.

That the local Board of Health of the town of Cheektowaga has proved unable or unwilling to abate the nuisances complained of. Within the last few months, the number of establishments carrying on the rendering business has been increased.

Your petitioners therefore pray that you will exercise the powers conferred upon you by the Revised Statutes, and order the State Board of Health to make the necessary examination with a view to having the nuisances complained of abated or removed.

And your petitioners will ever pray.

Dated, *June* 14, 1895.

Sloan, N. Y.

R. T. Ashman.
Ed. C. Green.
Fred. Ullman.
Mrs. Fred. Ullman.
Myron D. Dean.
A. L. Carpenter.
R. P. Horlock.
Ed. Dean.
Richard McGuire.
Hector McGregor.
W. C. Stinson.
Edgar W. Smith.
Geor. Meadway.
George Winser.
E. G. Thompson.
Samuel O. Miller.
Fred. Rust.
T. B. Barry.
A. W. Ackley.
Mrs. T. Barey.
A. J. Han.
Wm. Meadway.

John J. Textor.
Carl B. Green.
W. E. Keefer.
James Breen.
Gottlieb Morf.
John Barry.
Caleb Lawrence.
B. J. Tressett.
Peter Geier.
Frank Keller.
Wm. M. Hurd.
B. F. Robathan.
Richard Oliver.
C. W. Miller.
John Rogan.
M. T. Sockington.
H. Creheaton.
Chas. H. Wright.
Wm. Olday.
R. B. Young.
L. A. Stone.
J. T Gannon.
John Stinson.
Geo. H. Hunn.
Fred. Maltby.
Edward Ryan.
Newton Hungerford.
George Faber.
John Barnaley.

Buffalo, N. Y.

Michael Leary, 118 Gothe street.
John Douglass, 201 North Ogden street.
A. Rumun, 208 Gothe street.
Frank H. Russell, 238 Schiller street.
William M. Steel, 208 Davey street.
William Rae, Cheektowaga.

ıx L. Kaestner, Ph. G., 1140 and 1142 Lovejoy street.
P. Geoghan, 1144 Lovejoy street.
L. Weaver, 124 Gold street.
W. Le Van, 156 Gold street.
Andres, 158 Gold street.
arles A. Klocke, 1164 Lovejoy street.
m. H. Cornish, 283 Davey street.
H. Putman, 122 North Ogden street.
D. Miller, 222 Gold street.
m. Robinson 164 North Ogden street.
ul P. Witzleben, 112 Davey street.
ancis C. Nee, 162 North Ogden street.
orge Hartzell, 116 North Ogden street.
nry Riesenberg, 156 Longenerker avenue.
H. Kramer, 64 North Ogden street.
rist Lang, 28 Daye.
ıdrew Vesper, 1740 William street.
s. J. W. Lowing, 114 North Ogden street.
orge Vanness, 1221 Lovejoy street.
J. Westrup, 1159 Lovejoy street.
ıg. Bocksberger, 258 Ludington street.
lliam Snapp, 1159 Lovejoy street.
R. Hughes, 36 Ideal street.
orge Galloway, 241 Green street.
kob, Muller, 1803 Broadway.
ın Hiltenbrand, 44 Ideal street.
eph Wouk, 136 Benzinger street.
hael Fleming, 439 Benzinger street.
nes A. Bryan, 437 Benzinger street.
nes Hunter, 441 Benzinger street.
Healey, 433 Benzinger street.
hael E. Murray, 435 Benzinger street.
ın Holden, 429 Benzinger street.
eph Monnin, 426 Benzinger street.
gene Scherer, 416 Benzinger street.
ın Halek, 414 Benzinger street.

Oliver S. Gardner, 404 Benzinger street.
Michael Mahlmeister, 402 Benzinger street.
Gottfried Herrmann, 400 Benzinger street.
Frank Kavarek, 397 Benzinger street.
Christian Armbriester, 397 Benzinger street.
Mrs. M. J. Daly, 399 Benzinger street.
William Oberacker, 401 Benzinger street.
Henriette Pamzram, Benzinger street.
Jacob Vogt, 409 Benzinger street.
Ludwig Dietrich, 1903 Broadway.
Carl Fuhrmann, 326 Daye.
Thomas Lynch, North Ogden.
George Walter, 356 King.
John Kyzanovsky, 11 Reiman street.
Lawrence Walsh, 457 Gold street.
Henry Pfeiffer, 456 Gold street.
Terence McCann, 395 Goethe street.
George W. Hoffman, 463 Goethe street.
Simon Giese, 274 Goethie street.
Richard English, 295 North Ogden.
Isaac Chambers, 69 Reiman street.
J. L. Pomeroy, 1803 Broadway.
William Baus, 1803 Broadway.
W. F. Lepp, 1603 Broadway.
Julius O. Behleng, 1570 Broadway.
C. Baumann, 1638 Broadway.
C. E. Peckham, 102 St. Joseph avenue.
Stephen Crosby, 46 Hirschbeck street.
C. Springler, 1627 Broadway.
John Zanpfel, 1657 Broadway.
J. L. Duttweiler, 20 Stone street.
Conrad Lenhard, 21 Stone street.
George Weisner, 198 Shumway street.
O. P. Nelson, 348 Gold street.
George Praechtt, 1723 Broadway.
Jacob Mang, 1723 Broadway.

Conrad Phippes, 19 Dey street.
Charles Lowack, Wagner Parlor Car Co.
John V. Stumpf, 1667 Broadway.
Daniel O'Grady, corner Broadway and Bailey.
Camtern Bamhalyl, 1613 Broadway.
James D. Cooper, 1114 Bailey avenue.
Thomas A. Collison, 1141 Bailey avenue.
Louis Heimlick, 1139 Bailey avenue.
Mrs. Sarah Hurley, 1118 Bailey avenue.
Charm N. Newcomb, 1006 Bailey avenue.
Daniel Burke, 901 Lovejoy street.
C. C. Bailey, 999 Bailey avenue.
D. Sykes, 17 Sharsley avenue.
S. J. Collins, 767 Bailey avenue.
J. T. McCarthy, 59 Morland street.
H. S. Wasner, 35 Central avenue.
Fred. G. Wander, 80 Moreland street.
Joseph Hutchinson, 455 North Ogden street.
D. R. McFail, Bailey avenue, corner Lovejoy.
Henry W. Brush, 1009 Lovejoy street.
George W. McPhail, 898 Bailey avenue.
Jacob C. Heit, 82 Bogardus street.
F. C. Keebler, 1008 Lovejoy street.
E. W. Bailey, 833 Bailey avenue.
John D. Bogardus, 877 Bailey avenue.
P. H. Wackerman, 777 Bailey avenue.
Charles A. Eardman, 1009 Lovejoy street.
Edward H. Brush, 1009 Lovejoy street.
Jesse Brush, 1009 Lovejoy street.
Jacob Schaller, 612 Walden avenue.
E. G. Dauser, 592 Walden avenue.
O. M. Bromwell, 64 Brinkman street.
Edwin Kettle, 658 Walden avenue.
R. S. Miller, 619 Walden avenue.
M. Flamery, 48 Sumner place.
W. W. Thomas, 642 Walden avenue.

Joseph Coakley, 1187 Broadway.
Conrad Homi, 56 Pillow street.
E. T. Benson, 291 Ashland avenue.
Jacob Postiser, 44 Stone street.
Ira B. Littlefield, Wagner Car Works, Broadway.
Wilhelm Brandt, 108 Sumner place.
G. Koerner, 1414 Bailey avenue.
Edward Koch, 62 Sumner place.
George Cross, Wagner Parlor Car Co.
Otto Swenson, 712 Walden avenue.
Alfred Hellstrom, 712 Walden avenue.
Carl Hellstrom, 712 Walden avenue.
John Muller, 1803 Broadway.
Fred. Stephen, 324 Bowen street.
Reinholdt Baumgart, 53 Vanderbilt.
Matt Boettcher, Wagner Parlor Car Co.
Thomas Welsh, Wagner Parlor Car Co.
Harriet T. Lincoln, 652 Walden avenue.
John Macbeth, 672 Walden avenue.
H. A. Macbeth, 674 Walden avenue.
Louisa Sumner, 680 Walden avenue.
Patrick Crowley, 702 Walden avenue.
R. J. Haber, 803 Walden avenue.
James Wilson, 884 Walden avenue.
Tobias Witmer, 335 Doat street.
Charles H. Deister, 874 Walden avenue.
J. N. Johnson, 24 Poplar avenue.
Frank Holfner, 34 Poplar avenue.
Robert Buck, 38 Poplar avenue.
Charles L. Illig, 60 Poplar avenue.
Theodore Northcott, 66 Poplar avenue.
Peter Oberly, 77 Poplar avenue.
Charles Harrop, 129 Poplar avenue.
Thomas A. Gadd, 103 Poplar avenue.
Charles Beels, Jr., 95 Poplar avenue.
William George Miles, 55 Poplar avenue.

Meindert Adema, 53 Poplar avenue.
D. L. McKaig, 87 Poplar avenue.
Nick Eis, 35 Poplar avenue.
Alexander Longbotham, 16 Poplar avenue.
John E. Wilson, 33 Poplar avenue.
Louis Mertz, 1433 Bailey avenue.

STATE OF NEW YORK,
OUNTY OF ERIE, TOWN OF CHEEKTOWGA, } ss.:

On this 14th day of June A. D., 1895, before me the subscriber, ersonally came each of the following named persons, to me nown, and known to be the persons who severally subscribed eir said respective names to the foregoing petition, to wit: J. Ashman, Ed. C. Greene, Fred. Ulman, Mrs. Fred. Ulman, yron D. Dean, A. L. Carpenter, R. P. Horlock, Ed. Dean, Richard cGuire, Hector McGregor, W. E. Stinson, Edgar W. Smith, eorge Meadway, Geo. Winser, E. G. Thompson, Samuel O. Miller, red. Rust, T. B. Barry, A. W. Ackley, Mrs. P. Barey, A. J. Hun, m. Meadway, John J. Textor, Carl B. Greene, W. B. Keefer, mes Breen, Gottlieb Morf, John Barry, Caleb Lawrence, B. J. essett, Peter Geier, Frank Keller, William M. Hurd, B. F. Roba- an, Richard Oliver, C. C. Miller, John Rogan, Chas. Lockington, . Creheaton, and each of them severally acknowledged to me at they subscribed said petition.

ELIHU R. SHERMAN,
Notary Public, Erie County.

STATE OF NEW YORK,
OUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Frank Harding, being duly sworn, says that he is a commis- ioner of deeds in and for the city of Buffalo, but has no authority o take acknowledgements in the adjoining town of Cheektowaga n which is located the village of Sloan, but that he knows each of he following named persons, and he saw each of them subscribe is respective name to the foregoing petition at the said town of heektowaga on the 15th day of June, 1895, to wit: Charles H. Wright, Wm. Alday, R. B. Young, L. A. Stone, J. T. Gannon, John

Stinson, George H. Hunn, Fred. Maltby, Edward Ryan, Newton Hungerford, George Faber and Michael Leary, and each of said persons at the time of so subscribing said petition knew the contents thereof.

FRANK HARDING.

Sworn to before me, June 27, 1895.

ELIHU R. SHERMAN,
Notary Public, Erie County.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Personally before me the subscriber, a commissioner of deeds in and for the city of Buffalo, aforesaid, came each of the following named persons to me known, and known to be the same persons who severally subscribed their said respective names to the foregoing petition, to wit: on the 17th day of June, 1895, John Barnaley, John Douglass, A. Rummel, Frank Russell, William M. Steele, William Rae, Max L. Kaestner, J. P. Geoghan, L. L. Weaver, C. W. LeVan, A. Andres, Charles A. Klocke; on June 18th, 1895, William H. Cornish, J. H. Putnam, J. D. Miller, William Robinson, Paul P. Witzleben, Francis C. Nie, George Hartzell, Henry Risenberg, H. A. Kraemer, Christ Lange, Andrew Vesper, Mrs. J. W. Lowing, George Vanness; H. J. Westrup, Aug. Bochsberger, William Snapp, W. R. Hughes, Geo. Galloway, and on the 19th day of June, 1895, Jacob Muller, John Hiltenbrand, Joseph Wonk, Michael Fleming, James A Bryan, James Hunter, M. Healy, Michael S. Murray, John Holden, Joseph Monnin, Eugene Scherer, Johan Halek, Michael Mahlmeister, Gottfried Herrmann, Oliver S. Gardiner, Frank Kararek, Christian Armbruster, Mrs. M. J. Daley, Mr. William Oberacker, Henrietta Panzram, Jacob Vogt, Ludwig Dietrich, Carl Fuhrmann, Thomas Lynch, George Walter, John Kyzanovsky, Lawrence Walsh, Heinrich Pfeiffer, Terrence McCune, George W. Hoffman, Simon Giese, Richard English, Isaac Chambers, J. D. Pomeroy, and William Baus; and on the 22d day of June, 1895, W. F. Lipp, Julius O. Behling, E. Bauman, C. E. Peckham, Stephen Crosby, C. Spingler,

John Zaepfel, J. L. Duttweiler, Conrad Lenhard, George Wisner, O. P. Nilson, George Praechtt, Jacob Mang, Conrad Pfeiffer, Joseph Coakley, Conrad Horni; and on the 24th day of June, 1895, E. A. Benson, Jacob Rostiser, Ira B. Littlefield, Wilhelm Brandt, G. Koerner, Edward Koch, George Cross, Otto Swenson, Alfred Hellstrom, Carl Hellstrom, John Muller, Fred. Stephen, Reinholt Baumgart, Matt. Boetcher, Thomas Welsh, Charles Lowack, John Stumpf, Daniel O'Grady, Andrew Banhalzl, James D. Cooper, Thomas A. Collison, Louis Heimlich, Mrs. Sarah Hurley, Aaron N. Newcomb, Daniel Burk, C. C. Bailey, D. Sykes, S. I. Collins, J. V. McCarthy, H. S. Wasner, Fred. P. Wonder, Joseph T. Hutchinson, D. X. R. McFail, Henry W. Brush, George W. McPhail, Jacob C. Heit, F. C. Keebler, E. W. Bailey, John D. Bogardus, P. H. McKerman, Charles A. Eardman, Edward H. Brush, Jesse Brush; and on the 25th day of June, 1895, Jacob Schaller, E. G. Danser, S. M. Brownell, Edwin Kettle, R. S. Miller, M. Flannery, W. W. Thomas, Harriet T. Lincoln, James Macbeth, H. A. Macbeth, Louisa Sumner, Patrick Crowley, R. J. Haber, James Wilson, Tobias Witmer, Jr., Charles H. Deister, J. N. Johnson, Frank Holfelner, Robert Buck, Charles L. Illig, Thomas Northcott, Peter Oberley, Charles Harrop, Thomas A. Gadd, Charles Beels, Jr., William George Miles, Meindert Ademn, D. L. McKaig, Mr. Nick Eis, Alexander Longbotham, John E. Wilson, Louis Mertz, and each of the said persons on the said days mentioned severally acknowledged that he or she did so subscribe said petition; to all which I certify this 27th day of June, 1895.

FRANK HARDING,
Commissioner of Deeds, in and for Buffalo, N. Y.

To *His Excellency*, HON. LEVI P. MORTON, *Governor of the State of New York, Albany, N. Y.:*

The petition of the undersigned residents of and owners of property in the city of Buffalo, and town of Cheektowaga, in the county of Erie and State of New York, respectfully shows, as follows:

That on William street, just outside the limits of the city of Buffalo, in the town of Cheektowaga, there are several establishments carrying on the business of rendering dead animals and slaughter-house scrap, cremating garbage, bone-boiling, manufacturing sulphuric acid and fertilizers, etc.

That the vile stenches emanating from these establishments are a menace to the health, comfort and prosperity of your petitioners and all others who have to come in contact therewith.

That William street is one of the principal thoroughfares leading from the city of Buffalo into the adjacent country, and not only the residents of the immediate neighborhood, but every one passing from the city into the country, and vice versa, as well as the public traveling on the railroads running near the establishments in question, are obliged to inhale the abominable stenches arising from the works in question.

That the city of Buffalo has extended very greatly, within the last few years, in the direction of the works referred to, and is still extending in that direction, and as the population increases the number of people suffering from the effects of these smells increases.

That the stenches emitted from the said works are so vile that doors and windows have to be closed in hot weather, and even with these precautions citizens are afflicted and made sick as the obnoxious fumes permeate the entire atmosphere.

That in consequence of the stenches referred to, property in the neighborhood of the establishments is depreciated in value and rendered unsalable.

That the local board of health of the town of Cheektowaga has proved unable or unwilling to abate the nuisances complained of. Within the last few months, the number of establishments carrying on the rendering business has been increased.

Your petitioners, therefore, pray that you will exercise the powers conferred upon you by the revised statutes, and order the State Board of Health to make the necessary examination with

a view to having the nuisances complained of abated or removed.

And your petitioners will ever pray.

Dated, June , 1895.

Henry C. Klocke, 1164 Lovejoy street.
Frank Fones, 155 North Ogden street.
J. M. Newsom, 208 Davey street.
George Kahersberger, Cheektowaga, N. Y.
Henry Marsch, Jr., 1589 Broadway, city.
H. C. Marsch, 1589 Broadway.
Thomas S. White, 133 Schiller street.
George Meyers, 1087 Lovejoy street.
Roland Wilcox, 84 Armbuster street.
Geo. E. Freeman, Sloan, N. Y.
Reinhardt Meier, 1113 Lovejoy street.
Dr. Edward Bodenbender, 1164 Lovejoy street.
Jacob Bender, 143 North Ogden street.
Henry M. Box.
William F. Strasmer.
Ellen M. White, per A. D. White, agent.
J. T. McLaughlin.
E. V. Sniggs.
Albert L. Williams.
Estate of Chas. H. Hedley, per W. E. Hedley, executor.
Frank H. Hurd.
Geo. H. Hedley.
Phoebe W. Hedley.
William H. Johnson.
Charles B. Hill.
John L. Williams.
The Western New York Land Co., by Albert E. Jones, secretary.
Albert E. Jones.
Summit Land Co., T. W. Danforth, secretary and treasurer.
Clark L. Ingham.
Walter G. Hopkins.
Wm. B. Cutter.

In the Matter of the Investigation into the Alleged Nuisan Carrying on the Business of Rendering Dead Animals Slaughter-house Scrap, Cremating Garbage, Bone-bo Manufacturing Sulphuric Acid, Fertilizers, Etc., in Town of Cheektowaga, County of Erie, in the State of York.

To the Hon. LEVI P. MORTON, *Governor of the State of New*

Sir.— In compliance with instructions from your excell to examine into the above alleged nuisances and questions a ing the security of life and health in the locality aforesaid State Board of Health has the honor to report as follows:

On the 17th day of July, 1895, there was received fron Governor the following petition and order:

Petition.

To His Excellency, Hon. LEVI P. MORTON, *Governor of the St New York, Albany, N. Y.:*

The petition of the undersigned residents of and owne property in the city of Buffalo, and town of Cheektowaga, i county of Erie and State of New York, respectfully show follows:

That on William street, just outside the limits of the ci Buffalo, in the town of Cheektowaga, there are several estal ments carrying on the business of rendering dead animals slaughter-house scrap, cremating garbage, bone-boiling, n facturing sulphuric acid and fertilizers, etc.

That the vile stenches emanting from these establishment a menace to the health, comfort and prosperity of your petiti and all other who have to come in contact therewith.

That William street is one of the principal thoroughfares ing from the city of Buffalo into the adjacent country, an only the residents of the immediate neighborhood, but eve passing from the city into the country, and vice versa, as w the public traveling on the railroads running near the estal ments in question, are obliged to inhale the abominable ste arising from the works in question.

That the city of Buffalo has extended very greatly within the last few years, in the direction of the works referred to, and is still extending in that direction, and as the population increases the number of people suffering from the effects of these smells increases.

That the stenches emitted from said works are so vile that doors and windows have to be closed in hot weather, and even with these precautions citizens are afflicted and made sick as the obnoxious fumes permeate the entire atmosphere.

That in consequence of the stenches referred to, property in the neighborhood of the establishments has depreciated in value and rendered unsalable.

The local Board of Health of the town of Cheektowaga has proved unable or unwilling to abate the nuisances complained of. Within the last few months, the number of establishments carrying on the rendering business has been increased.

Your petitioners, therefore, pray that you will exercise the powers conferred upon you by the Revised Statutes, and order the State Board of Health to make the necessary examination with a view of having the nuisances complained of abated or removed.

And your petitioners will ever pray.

Dated *June* 14, 1895.

(Signed.) HENRY W. BOX.

And 300 or 400 other citizens living in and near the town of Cheektowaga.

Order.

"STATE OF NEW YORK:

EXECUTIVE CHAMBER.

To the State Board of Health:

I have been presented with a petition signed by numerous residents of the city of Buffalo and town of Cheektowaga, Erie county, stating that on William street in the said town of Cheektowaga, there are numerous establishments carrying on the business of rendering dead animals, and engaged in other transactions that create a public nuisance and menace to the health and com-

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fort of the people residing in that vicinity and the persons compelled to travel in or near said city; and further stating that various citizens have been made sick; and that life and health in that locality have been affected in consequence of the alleged grievances set forth in the petition.

I, therefore, require you, in accordance with the provisions of section 6 of article 1 of the Public Health Law, to make an examination into the alleged nuisances and questions affecting the security of life and health in the locality aforesaid, and report the result thereof to me, on or before the 1st day of September, 1895.

Dated at the Capitol at Albany, this 17th day of July, 1895.

LEVI P. MORTON,

Governor."

In pursuance of said order of the Governor, the State Board, through its committee appointed for that purpose, met at the Iroquois Hotel in the city of Buffalo, on the 30th day of July, 1895, for the purpose of investigating said nuisances, and after listening to the complaint of the petitioners, made by Sherman S. Rogers and Albert E. Jones, attorneys for said petitioners, visited the locality where said nuisances were alleged to exist and made a personal inspection of Bayne's Garbage Crematory Works, the Milson Rendering and Fertilizer Works, the Scheid & Fechter Rendering Works, the Betts Bros.' Rendering Works and the McGennis Rendering Works. All of said works are situated on William street, a street running east and west through a portion of the town of Cheektowaga and the city of Buffalo, and not more than 2,000 feet east from the easterly line of said city.

Bayne's Garbage Crematory was established in 1887 or 1888, and is a duly incorporated stock company, having a capital stock of about $64,000, owns a block of land comprising about two acres, is located just outside of the city limits, about 600 feet east therefrom, and is engaged in the cremating of the garbage of the city of Buffalo, and the vicinity in which the establishment is located; employs about thirty men and cremates about eighty tons of garbage a day. It has a contract with the city of Buffalo to dis

pose of the city's garbage, and turns out two commercial products —grease and tankage. The garbage is brought to the factory in open wagons, which are driven up an inclined plane, and dumped in steel cars just below the platform. It is then run on the railways to the elevator and elevated to the top of the third floor of the building and on that floor dumped into receiving tanks. These tanks are made of boiler iron and are supposed to be hermetically sealed except at the bottom where the drainage pipe is laid. The capacity of each tank is about twenty tons of garbage. The garbage is cooked in these tanks until it is ready to be disposed of, then it is removed from the bottom of the tank, and after tin cans and such other refuse matter is separated from it, it is passed into another tank or dryer, the steam is then turned on and the drying process continues for a period of from five to seven hours. Each dryer is connected with the roof by a flue or stand pipe, perhaps 8 or 12 inches in diameter, and the gases generated by the drying process are transmitted from the roof into the atmosphere. The material is then emptied out of the dryer onto the floor and is shoveled from the floor through a manhole, and is then transmitted to the upper story again by the use of an endless chain; after reaching that point it is put into extractors, so called. The extractors are similar in construction to the receiving tanks, having a capacity of about twenty tons. It is then submerged in naphtha, the tank is sealed and the steam is turned on. The naphtha extracts from the dry garbage the fatty and oily materials that may be in it. After this extraction is continued a sufficient length of time, the tank is opened in the bottom and the naphtha containing the fat in solution is transmitted through a pipe to a separator, where it meets with a jet of steam which volatilizes the naphtha and that is carried along to a condenser from whence it is carried to a naphtha tank. The fat is not volatilized and is carried to the grease tank. The system, briefly described, is known as the "Merz System," or a modification of the same. The material in the extraction tanks is then removed, and after drying a sufficient length of time, transmitted to the screens where it is sifted, the finer material is

passed one side and the coarser materials, such as rags and things of that character, are removed, put aside, and the bones are ground in the mill, and this finished tankage is used for making fertilizer.

The Milson Rendering and Fertilizer Company had its beginning in 1874 or 1875. The business was started by a firm known as Hughes & Milson. It was duly incorporated in 1886, under the laws of this State, and has a capital stock of $400,000. It is located about 1,000 feet east of the city line and on the north side of William street, occupying between nine and 10 acres of land The plant is inventoried at $125,000. It is engaged in the business of rendering dead animals and manufacturing fertilizers, sulphuric acid, etc. Its yearly output in quantity is about 15,000 tons of fertilizer, a large quantity of tallow, grease, glue, horns and hoofs and hides, its output in value being between six and seven hundred thousand dollars. It employs about 100 men and renders, on an average, between 75 and 100 dead animals daily. A large number of these dead animals are received from the stock-yards situate on the same street, within the city limits, and a little over a mile west of the rendering works, and covering about 75 acres of land. Between twelve and thirteen hundred carloads of animals are received at the stock-yards weekly, and those that die or are killed in transit are taken immediately to the Milson Rendering Works. The process of rendering is briefly described as follows:

On the reception of the animal matter, consisting of cats and dogs, horses and cows, sheep and swine, fish and fowl, offal and other waste material, it is taken up to the third floor on the elevator and cut up and dumped into tanks, which are hermetically sealed at the top; the steam is then turned directly on at the bottom and the matter is thoroughly cooked. From the top of each of these large rendering tanks a pipe leads into a six-inch pipe, through which there is caused to flow a considerable amount of water. The gases coming from each of these tanks are partially absorbed by the water and flow along with it into a large cistern or vat containing disinfectants. The vat is provided with an over

flow, which leads on down to the sewer. When the material in the tanks is cooked, and a portion of the grease and oils is drawn off through stop-cocks, it is allowed to drop directly into wooden vats about 10 feet long, seven wide and four deep, placed under the tanks. In these open vats this hot, cooked matter is treated with sulphuric acid, and it is further cooked by means of coils of steam pipe in the bottom of the vats. The cooking or concentration begun at this point is carried along for a while and then the solution is run off into other tanks on the adjoining floor, where the cooking or concentration is still further carried on. The tank liquor, after flowing through several reservoirs, finally reaches what is called the "stick-room," where it is still further acidulated and concentrated. In this room the effluvia which does not escape in the atmosphere is carried through a suction conduit into the furnace. The tankage, which settles in the vats under the rendering tanks, is conveyed in barrels from an adjoining portion of the works and is still further chemically treated; the material is then dumped into dryers having suction conduits which lead round to the fire-box of the boiler. There is also a bone dryer that discharges its gases directly into the smokestack near by and they are discharged into the open air. The sulphuric acid plant is the most easterly of the series of buildings owned and operated by this company. A 12-inch ventilating flue leads to the roof from the lead chambers used in connection with the manufacture of sulphuric acid, and through this flue are discharged into the open atmosphere yellowish-brown fumes known as "nitrogen fumes." In the manufacture of fertilizers in other parts of the works this animal matter is treated with violent chemical agents, such as sulphuric acid, etc.; and while this animal matter is piled up and chemical changes taking place a considerable quantity of volatile compounds escape into the open air.

The Scheid & Fechter Rendering Works are situate on the north side of William street in said town, and just east of the city line and opposite the garbage works; have been in operation some seven or eight months. The plant is estimated at about $40,000, and the business is simply that of rendering dead animals. The

dead animals and waste are hoisted up to the second floor and dumped into a tank which, is then sealed and the steam turned on, going directly into the substance, and after several hours the bottom outlet of the tank is opened and the contents run into a box which is below. In this box the water is allowed to separate in part from the solid matter; the grease is partially skimmed off, and subsequently the liquid drawn off through holes in the bottom of the box is allowed to flow directly into the sewer through an opening in the floor. The matter is then shoveled into a dryer, in which the moisture and volatile constituents are driven off through a wooden outlet which goes up through the floor to the top of the building.

The Betts Bros. Rendering Works are situate on William street in said town, about 2,000 feet east of the city line, and have been engaged in the business of rendering animals and slaughter-house scraps for about twenty years. They have about 10 acres of land, and the rendering works, including real estate, is estimated at about $75,000. The process is similar to the Milson Works, using rendering tanks, slush-boxes, dryers and fat receivers.

The McGennis Rendering Works is another small plant engaged in rendering animals, and is located on the north side of William street, near the other establishments, and the process is similar in character although not so carefully conducted as the other rendering works.

After making a personal inspection of each of said works, observing and inquiring into the methods employed, and notifying the owners of each of the purposes and objects of the inspection, the hearing was adjourned to August 7th, at the Lackawanna Hotel, in the town of Cheektowaga, and said owners were requested to appear in person and by attorneys at that time to give testimony as to the character of the charges preferred against them and the nuisances complained of in said petition. At the hearing commencing August 7th and lasting through four days, the petitioners appeared by their attorneys, Rogers, Milburn & Locke. The Milson Rendering and Fertilizer Works appeared by Day & Romer; the Scheid & Fechter Works were represented by

D. J. Jackson, and the Baynes Garbage Crematory were represented by Tabor & Wilkie, through Mr. Cuneen. Fifteen lay witnesses were examined in the interest of the petitioners and the same number called on behalf of the establishments aforesaid. The health officers acting for the town of Cheektowaga and the city of Buffalo during the last five years were also examined. Physicians, sanitary experts and chemists, called by the rendering establishments and in the interest of the petitioners, were examined at length, and their testimony is referred to and made a part of this report as if herein at length set forth. From the investigation of each of these works by the Board of Health and the testimony taken the board makes the following findings of facts:

I.

That it is necessary to the life and health of large cities that some disposition be made of the garbage and refuse materials, dead animals and animal matter collected therein, and that the "Reduction System," so called, is equal if not superior to any other system used for that purpose.

II.

That in carrying on and conducting such business, if done in the most approved and scientific manner, private interests should gracefully yield to public demands, especially if such demands are made in the interests of health.

III.

That the question of where such works should be operated is largely one of locality. One community can not be relieved without unloading upon some some other, and so long as the stock yards remain where at present located in the city it is doubtful if a more convenient or less objectionable place for operating said works can be found in or about the city of Buffalo.

IV.

That wherever said business is carried on, and however carried on, odors, more or less disgustingly offensive, are given off, and if

allowed to escape in the atmosphere constitute a nuisance more or less injurious to the fullest and freest enjoyment of property rights.

V.

That in each of said works engaged in rendering dead animals and in the disposal of garbage the business is carried on in loosely constructed buildings, and large quantities of the gases and effluvia necessarily given off are not collected or properly disinfected, or burned by the use of suction conduits, supplied with fans and leading to the fires, but escape in the open air through the cracks and openings in said buildings.

VI.

That foul, sickening and noxious odors, pungent, penetrating and nauseating, emanate in large quantities from each of these several establishments, are dissipated in the open atmosphere, and during the sultry days of summer are almost unbearable.

VII.

That while the local board of health of the town of Cheektowaga has tried, in a measure, to meet the demands made upon it by the citizens living in the vicinity of the works it has not until very recently adopted rigid sanitary rules, and even these have not been complied with by some of the works.

VIII.

That said establishments as at present operated, constitute a nuisance injurious not only to the enjoyment of property rights but to the public health, in so far as they depart from the most approved and scientific methods of collecting and destroying all gases and effluvia given off and ignore or disregard the most stringent sanitary rules and regulations.

The State board would, therefore, recommend that an inspector, to be named by them, be appointed, whose duty it shall be to enforce such sanitary rules and regulations as may be prescribed by the board for the conduct of the business carried on by said

works; said inspector to hold office during the pleasure of the State Board of Health, to be paid a salary of $..... per year, monthly, in advance, by the persons and corporations carrying on the trades and occupations herein referred to. That said inspector shall be required to visit and make a careful examination of all the said establishments at least twice in each week, and as often in addition thereto as the State Board of Health may prescribe. That it shall be his duty to report to the State Board of Health weekly from the 1st day of June to the 1st day of November in each year, and monthly at other times, upon the general sanitary condition of each of said establishments, and also report to said board all violations of sanitary rules and regulations prescribed by them within twenty-four hours after such violation; and in default of compliance with the rules and regulations of said board by any of said persons or corporations the Governor may make such further orders, on the application of the State Board of Health, as may be necessary to secure the removal of the nuisance or nuisances complained of.

DANIEL LEWIS, M. D.,
President State Board of Health.

Approved October 29, 1895.

BAXTER T. SMELZER,
Secretary State Board of Health.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Edward L. Brininstool, being duly sworn, says that he resides in said city of Buffalo, and from November, 1890, till May 1, 1893, he resided in the town of Cheektowaga in said county, on William street, about eighty rods east of the city line of the city of Buffalo. That the Betz Bros. rendering works is located almost directly across the street from where deponent resided, and was in operation at all times while deponent resided there; that the Milsom Ren-

dering and Fertilizing Works are just east of said city line and near them are the rendering works of Magennis & Schied, and south of the last two works and, on the opposite of William street, is located the Baynes Garbage Crematory Works. At said crematory works the garbage and refuse of Buffalo is taken, and put through certain processes by which the grease is extracted and the refuse is then dried; that in said process foul smells are created, and foul smells come from the collection of large quantities of garbage and filth from said city of Buffalo, that as a result the air becomes laden with such smells. That the smell of said crematory differs from the smell from said rendering works and is easily discernable therefrom. That the smell from said crematory is a smell like burned cabbage and swill, and the smell from said rendering works is the smell of carrion and decaying animal matter; that in consequence of said smell the houses in the vicinity of said factories are filled with a very large number of large flies. That the business carried on at such rendering works is extracting grease from dead animals and making the refuse into phosphates. That very large numbers of dead horses, cattle, hogs and sheep are brought to said various rendering works from the city of Buffalo, particularly from the stock yards in said city. Deponent has seen a number of said dead animals taken to said works; frequently said dead animals lie at said works over night before anything is done with them; often such dead animals are in a very decayed and offensive condition. Deponent has been through all said works except the Magennis & Schied works and noticed the process of operating them.

EDW. L. BRININGTOOL.

Sworn to before me, September 29, 1894.

DAVID RUTLANDER,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

William B. Holloway, being duly sworn, says that he is a resident and land owner in the town of Cheektowaga, in said county; that his said residence and land is situate about a quarter of a mile east from Baynes Garbage Crematory Works in said town; in and about the months of August and September, 1893 and 1894, he saw large quantities of garbage hauled from said crematory and dumped on the ground over a large territory south and east of said crematory; that the foreman of said work informed deponent that they hired teams to work for them; that deponent is informed that some of the teams engaged in hauling garbage from said crematory are in the employ thereof; that such teams are loaded at the works; that other teams haulding iron dump carts of garbage from the city of Buffalo draw such garbage direct from said city to the field without stopping at said works, except to weigh said garbage; that such garbage is dumped on the ground to a depth so deep that it was and is impossible to plow the same in, and such garbage lies unburied and decays, filling the air with offensive smells. That deponent is well acquainted with the smell coming from said crematory and also from the rendering works on the northerly side of William street, and can distinguish the different difference in the odors that he is able to distinguish the oppressive smell from said crematory, from the fumes of sulphurous acid eminating from the rendering works, that the smell from said crematory is very sickening and oppressive.

WM. B. HOLLOWAY.

Sworn to before me November 10, 1894.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, } ss.:

Leon M. Sadler, being duly sworn, says that he resides in the township of Cheektowaga, in said county, and is postmaster at Sloan post-office, in said town; that he has resided at said post-office since July 1, 1894; that his said residence is situated about one-half mile northeast from the Milsom Rendering and Fertilizing Works on William street; that whenever the wind blows towards deponent's residence from the direction of said rendering works, the atmosphere is filled with offensive smells and stench which is beyond deponent's power to accurately describe, but is quite similar to carrion or rotting flesh and decaying animals, and frequently is almost unbearable; that it is generally strongest and most offensive during damp weather.

LEON M. SADLER.

Sworn to before me September —, 1894.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Edward C. Green, being duly sworn, says that he resides on Halstead avenue, at Sloan, in the township of Cheektowaga, in said county, and has for seven years last past, and is employed at the D. L. & W. car shops; that he has a family and is a housekeeper at his place of residence; that deponent's residence is northeast from the intersection of William street with the easterly line of the city of Buffalo; that a short distance east from said intersection are located certain industries, called rendering works, and a garbage crematory; that at such rendering works dead animals are worked into phosphate fertilizers; that many animals dying from various causes are brought to said rendering works to be worked up; that the garbage of the city of Buffalo is collected and brought to said crematory for the purpose of being disposed of by the pro-

cess used thereat; that by reason of collecting such dead animals and garbage and the working up of the same, the atmosphere of the entire section of country round about such works for a considerable distance is contaminated with vile and sickening smells and stenches, which deponent has smelled for three miles away from said works; that deponent has noticed that in warm weather when the air is still and damp the stench settled down on the entire country for miles from said works, and is almost unbearable; that when the wind blows moderately toward deponent's residence from the direction of said industries it brings such stenches; that when the wind blows from deponent's residence toward such industries deponent is relieved and the section on the opposite side of said industries suffers from such stenches; that deponent has several times visited said works for the purpose of inspecting the same and learning the source of such stenches; that deponent has noticed two distinct smells, one the smell of putrid flesh or carrion and the other a sour sickening vegetable smell, which to the deponent is very distressing and suffocating; that such smells have pervaded the atmosphere of the section as long as deponent has resided in the locality, and such industries have been there during such time; the smell is most offensive at night generally the fore part of the night; when I was at the Milsom Rendering and Fertilizing Works, one of the factories mentioned, there were several large tanks about — feet in diameter, and — feet high, the tops of which extended through the floor of the second story, nearly all the boiler being below such floor; there is an opening in each of those tanks provided with covers, and when meat is being boiled therein the covers are closed and fastened; I do not know where the steam goes to when the pressure is great and there is necessity for it to escape; I have noticed that some of the meat they boil has been in a putrid and offensive condition; I have been on the outside of these works to see if there was a bad smell; I have discovered that it smells very bad about them all, and I can tell that the smell comes from them; I think there is less smell at the Magennis Rendering Works and the Betz Bros. Rendering Works than at the Milsome Rendering Works, but still

there is lots of carrion smell coming from them, the two are much smaller than the Milsom; all these rendering works give off the carrion smell round about them and it is one of the smells that we smell at Sloan; the Magennis Rendering Works was formerly called the Magennis and Scheid Rendering Works. The bad smell we get in the night so much is a sour vegetable smell; I have retired with my family at night all of us well, and this smell would come so strong that we would all be made sick, we would run to the window for fresh air, but would find it much worse there, and would close up the house as close as possible, for the more air we got from the outside the worse the smell. I lived for some months over on Gates street, east of my present residence, and there we experienced the same offensive smells, coming from the direction mentioned.

EDWARD C. GREEN.

Sworn to before me, May 30, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } *ss.:*

Charles W. Le Van, being duly sworn, deposes and says: I reside at No. 156 Gold street, Buffalo, N. Y., and am a machinist in the employ of the New York Central and Hudson River Railroad Company; am a man of a family, and for the last five years or thereabouts have lived in the same vicinity, a portion of such time, at a place called Sloan, in the township of Cheektowaga, and the balance of such time on Gold street, in said city.

That during all such time, both at Sloan and on Gold street, the atmosphere has, at frequent intervals, been contaminated with vile and offensive odors; that the same consist of two distinct smells, one a sour smell and the other the smell of putrid flesh or carrion, or very similar thereto; that both of said smells, at intervals, pervade a large section of country round about the inte-

section of William street and the easterly line of the city of Buffalo; that on William street, immediately east of said city line and in the said township of Cheektowaga, are located the Baynes Garbage Crematory Works, the Milsom Rendering and Fertilizing Company's Works, the Magennis Rendering Works, the Shied & Fechter Rendering Works, and the Betz Brothers' Rendering Works; that the offensive smells mentioned emanate from said works; that such smells are always worse in damp weather, especially before a rain or during a fog; that I have investigated the causes of such smells and, on one occasion, in October, 1894, visited said garbage works and the Magennis Rendering Works, and went through them for the purpose of learning the source of such offensive smells; the Sheid & Fechter Works had not at that time been erected; William M. Steel of 208 Davey street, and Lucius L. Weaver of 124 Gold street, in said city, were with me; we took notice of the direction of the wind and went into the field so that we could catch the wind blowing toward us from the Garbage Crematory Works without catching the wind from any of the rendering works; here we smelled a sour smell, one of the smells I have mentioned as pervading the atmosphere of this section of country, with this sour smell was, at times, mingled a smell of dry vegetable fibre burning; then we changed our location so as to catch the wind toward us from the rendering works without catching the wind from the garbage crematory; here we smelled a sickening smell, a dirty, rotten, carrion smell; we went through the Magennis Rendering Works, the one that used to be called Magennis & Sheid Rendering Works; we were shown through them by a red-headed young man; I understand him to be the son of the old lady living near by, whom, I am told, is Mrs. Magennis, the present proprietor; he showed us where they boiled, dried and pulverized their material; they had just finished boiling up a tank of meat, and took off the cover just as we got there; it smelled very bad, the same carrion stench I have smelled on the outside of these rendering works, and is one of the offensive odors I have mentioned as pervading the country round about these works for considerable distance; I noticed the apparatus with which the

work was done, particularly the tank in which the boiling is done; it is so arranged that the top of the tank passes through the floor of the second story, and the opening is into such upper story so that they may drop the meat and other raw material from such upper floor through such opening into the tank; all the tanks are arranged in this way; there is a cover that closes tight over this opening in the top of the tank, and is securely fastened down during the boiling process; a pipe runs out from the side of this tank; it runs downward, then upward through this upper floor; I can't say that this pipe runs out through the roof, but I noticed a pipe appearing to come up from the same locality, passing out through the roof; on the side of the tank and in connection with this pipe is a safety valve, the lever of which was held down by a weight; this safety valve was to permit the steam to escape from the tank through this pipe when the pressure became too great, or above a certain amount; while we were looking through the works the old lady, I have mentioned, came in and ordered us out; the young man called her mother; the young man showed us a barrel two-thirds full of putrid substance; it was uncovered and smelled very offensive; he said it was blood, and that it had stood there some time; I think he said two weeks; said he would have to boil it up before long; we were not allowed to enter the Milsom Rendering Works; there is a rotten carrion smell coming from the Milsom Works; we went through the Garbage Crematory Works; the smells that pervades this section of country are always worse in damp weather, just before a rain or during a fog; a few days ago it rained and this carrion smell was very bad all through the neighborhood where I live; this smell has not abated since the time we visited the works; and the smell that we are smelling in our neighborhood is the same smell that we have smelled there for the last four or five years; I mean during the time I have lived there.

CHARLES W. LE VAN.

Sworn to before me, May 21, 1895.

FRANK HARDING,

Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Lucien L. Weaver, being duly sworn, says that he resides at No. 124 Gold street, in said city of Buffalo; that in October, 1894, in company with Charles W. Le Van and William M. Steel; he went to William street, just east of the east line of the city of Buffalo, to investigate the source of offensive smells that for several years have pervaded the atmosphere of the entire country round about rendering works and garbage crematory located just east of the said city line; we went into the field to catch the wind from the crematory works without getting the wind from the rendering works; here we smelled a sour smell and a smell of something burning; then we changed so as to catch the wind from the rendering works without getting the wind from the crematory works; here we smelled a dirty, rotten, carrion smell; we went through the crematory works and the Magennis Rendering Works; they had just been boiling up some stuff in a tank in the Magennis Rendering Works and took off the cover just as we got there; the smell that came out was very offensive; I have smelled a similar smell on the outside of the works; it is one of the smells I have mentioned as pervading this entire section of country; these smells have pervaded the atmosphere of this section for several years; it is worse in damp weather, particularly before a rain or during a fog; in the night time, when the atmosphere is damp and heavy, the smell becomes almost unbearable; it is just as bad now as it was last year.

LUCIEN L. WEAVER.

Sworn to before me, May 21, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

William M. Steele, being duly sworn, deposes and says: I reside at 208 Davey street, Buffalo, N. Y.; I am a freeholder, and a man

of a family; I have resided on Davey street three years; I have lived in the immediate vicinity of my present residence about seven years; during all the time I have resided here the rendering works, near William street and the city line, have been where they are now; the Garbage Crematory Works were built the year after I came; my present residence is located about a quarter of a mile from the garbage crematory works; when the air is damp, just before a rain, or when it is foggy (I call it when the air is heavy), and when the wind moves this way from the southeast, that is from the direction of the works mentioned, the smell is almost unbearable; it smells terrible; I can hardly describe the smell; it is a sickening, exhausting smell; I have tried to trace it up and learn the particular source of this smell, where it comes from; I have been to these works several times; last October I went through the Magennis Works; it was on a Sunday; there were three or four or five old horses lying there, and a pile of hides 3 feet high; they had three rendering tanks there; one was nearly full of what appeared to be flesh more or less decayed and smelled very strong of carrion; when the wind blows from my residence toward these works we don't get the smell in our neighborhood; I think these smells come over from these works; about four days out of a week they get these smells in Sloan because the wind blows most frequently that way from these works; in going about these works I have tried to notice which was the greatest nuisance; that is which smelled the worse, but I can not tell which of the various works mentioned smells worse; don't know that the smell is any worse at night than in the day time, unless the atmosphere is damper in the night than in the day time, it depends largely on whether the atmosphere is damp and the way the wind blows.

WILLIAM M. STEELE.

Sworn to before me, June 11, 1895.

FRANK HARDING,

Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Frank C. Keebler, being duly sworn, deposes as follows: I reside at No. 1008 Lovejoy street, in Buffalo, aforesaid, and have resided there two years the first day of last April; I am a man of a family and have resided in the same vicinity nine years; the atmosphere in this vicinity has for a long time been filled with very foul odors; when the wind blows from the east toward my present residence it brings these foul smells; one is a sour, sickening smell, and the other a carrion smell; for two years and three months I worked at the William street station on the Erie railroad; worked one week in the day time and one week in the night time, alternately; this station is just across the track from the Milsom Rendering Works, the Magennis Rendering Works and the Scheid & Fechter Rendering Works, and a short distance beyond, on the south side of William street, is the Baynes Garbage Crematory Works; I became very familiar with these smells and learned just where they came from; this sour, sickening smell comes from the garbage crematory works, and the other smell, the carrion smell, comes from the rendering works; I boarded at the Brick Hotel, near by the station, for the first six weeks I worked there; the smell used to wake me up nights it was so bad; these smells we smell here now are the same odors, but probably not so strong as they used to be, or it is because I have become accustomed to them.

FRANK C. KEEBLER.

Sworn to before me, June 11, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

George W. Hoffman, being duly sworn, says that he resides at 463 Goethe street, in said city, and is a switch tender for the New York Central and Hudson River Railroad, and is stationed at

night on Broadway, in said city, and has been for two and one-half years last past; that Goethe street is the last street in the eastern side of said city, being north and south in direction and next to the city line; that at deponent's residence, which is about one mile from the junction of William street of said city with the east line of the said city, and at the switch-house where deponent is stationed at night, there are very frequently foul smells pervading the atmosphere; that said smell is very oppressive at times, and is sickening at all time when prevalent; that said smell comes with the wind from a southeasterly direction, which is the direction in which the garbage crematory works and the several rendering works on William street are situated; that said various works are at least a mile away from the switch-house where deponent is stationed at night; that at night, when the air is still, the foul smell is very prevalent and sickening; that it may be smelled nearly every night.

GEORGE. W. HOFFMAN.

Sworn to before me, May 21, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } *ss.:*

Myron D. Dean, being duly sworn, says that he resides on Halstead avenue, in the township of Cheektowaga, in said county; am a carpenter and joiner; have resided on Halstead avenue six years; during all such time this entire section has been troubled with foul odors which come from the direction of the rendering works and garbage crematory on William street, just east of the city line; it smells worse in the evening, particularly when the weather is warm and damp; when the wind blows toward us from the works it brings the bad smell, but when the wind blows from us toward the works we do not get the smell; the smell is just as bad this spring as ever, and during the warm weather this spring

there was a time that we had to close the house to keep this smell out.

MYRON D. DEAN.

Sworn to before me, May 30, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK, }
COUNTY OF ERIE, } *ss.:*

R. P. Horlock and H. McGregor, being severally duly sworn, says that he resides near Sloan post-office, in the township of Cheektowaga, in said county, and has for some years last past; that he is a man of family, and is a freeholder and householder at said Sloan; that for several years deponent, his family and the people living around about him have been annoyed by the prevalence of foul and sickening smells and stenches, that frequently pervade the entire atmosphere of that section; that in the westerly part of the town of Creektowaga, in the vicinity of William street, is the Baynes Garbage Crematory Works, the Milsom Rendering and Fertilizer Company's Works, the Betz Brothers' Rendering Works, and the Magennis Rendering Works; that whenever the wind blows from the direction of the said works and crematory the air is filled with the foul stenches above mentioned; that when the wind changes deponent and his premises are temporarily relieved from the said foul stenches, and those localities toward which the wind shifts suffer from such smells; that said smell is particularly offensive before a rain and during the night; that at night, when the air is still, the atmosphere of the whole country surrounding said works and crematory is heavily laden and thoroughly permeated with the said stenches; that the smell from said garbage crematory differs from the smell of the rendering works, and the said difference in smell deponent is able to distinguish; that deponent has been in and about said different works, and knows as a fact that said smells come from the works aforesaid; that the smell from said crematory is a sickening

smell, and the smell from said rendering works is the smell o carrion and decaying animal matter.

R. P. HORLOCK.
H. McGREGOR.

Sworn to before me, June 14, 1895.

ELIHU R. SHERMAN,
Notary Public, Erie County.

STATE OF NEW YORK,
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Earl G. Danser, being duly sworn, says that he resides at N 592 Walden avenue, Buffalo, N. Y., and for the last eight yea has resided in the same vicinity; that deponent is a physician, an is a freeholder and a man of family; that his residence is at lea a mile distant in a northwesterly direction from the Baynes Ga bage Crematory Works on William street, in the township Cheektowaga; that in the vicinity of said crematory are sever rendering and fertilizing works; that deponent has frequent passed by on the street where said works are located, and se eral times at night; that the atmosphere at such place was co taminated with offensive odors, one odor in particular, which very difficult for deponent to describe, being very noticeable an offensive; that deponent has smelled the same peculiar odor his residence and at other places quite distant from said work that said odor is very noticeable in the evening at deponent's res dence and in the vicinity thereof when the weather is warm an the air moves in that direction from said works; that deponent certain that the odor he has mentioned as having smelled in th vicinity of said works is identical with that pervading the atmo phere at times in the vicinity of his residence; that deponent ha smelled this same odor in many places round about said work and at considerable distance therefrom, and particularly when th air was moving toward deponent from said works.

E. G. DANSER.

Sworn to before me, May 29, 1895.

FRANK HARDING,
Commissioner of Deeds, Buffalo, N. Y.

STATE OF NEW YORK, }
COUNTY OF ERIE, } ss.:

Robert I. Ashman, being duly sworn, says that he resides on Halstead avenue, in the township of Cheektowaga, in said county, a short distance south of the Sloan post-office, and is a merchant; that he has kept a store at his present residence for five years, and has resided at such place for six years; that his residence is in a northerly direction from the Rendering Works and Garage Crematory on William street; that whenever the wind blows toward Sloan from the direction of said rendering works and garbage crematory the atmosphere is filled with vile stench, which often has compelled deponent to close his doors and windows; that said smell is terrible and beyond deponent's power to describe its offensiveness, and seems to be a combination of carrion and other foul matter; that at times the whole country, for a great distance round about said rendering works and garbage crematory is filled with such smell; that deponent has been about said rendering works and crematory and inspected the same for the purpose of discovering the occasion of said smell, and that he knows that such smells originate at said works and crematory; that when the wind blows from Sloan, toward said works, said and at considerable distance therefrom, and particularly when the air is warm and damp, and particularly in the evening.

ROBERT I. ASHMAN.

Sworn to before me, June 14, 1895.

ELIHU R. SHERMAN,
Notary Public, Erie County.

STATE OF NEW YORK, }
COUNTY OF ERIE, CITY OF BUFFALO, } ss.:

Samuel O. Miller, being duly sworn, says that he resides in the township of Cheektowaga, in said county, and has for eight years last past, and is employed as a locomotive fireman; that he is a man of a family, and is a

freeholder and householder at said township; that for several years deponent, his family and the people living round about him have been annoyed by the prevalence of foul and sickening smells and stenches that frequently pervade the entire atmosphere of that section; that in the westerly part of the town of Cheektowaga, in the vicinity of William street, is the Baynes Garbage Crematory Works, the Milson Rendering and Fertilizer Company's Works, the Betz Brothers' Rendering Works and the Magennis Rendering Works and the Scheid & Fechter Rendering Works; that whenever the wind blows from the direction of the said works and crematory, the air is filled with the foul stenches above mentioned; that when the wind changes, deponent and his premises are temporarily relieved from the said foul stenches, and those localities toward which the wind shifts suffer from such smells; that said smell is particularly offensive before a rain and during the night; that at night, when the air is still, the atmosphere of the whole country surrounding said works and crematory is heavily laden and thoroughly permeated with the said stenches; that the smell from said garbage crematory differs from the smell of the rendering works, and the said difference in smell deponent is able to distinguish; that deponent has been in and about said different works, and knows as a fact that said smells come from the works aforesaid; that the smell from said crematory is horrible beyond description, and the smell from said rendering works is the smell of carrion and decaying animal matter; deponent resides about 100 rods from said crematory, northeasterly therefrom.

S. O. MILLER.

Sworn to before me, May 30, 1895.

FRANK HARDING,

Commissioner of Deeds, Buffalo, N. Y.

BEFORE THE STATE BOARD OF HEALTH.

In the Matter of the Investigation Into the Alleged Nuisances o Carrying on the Business of Rendering Dead Animals and Slaughter-house Scraps, Cremating Garbage, Bone Boiling, Manufacturing Sulphuric Acid, Fertilizers, Etc., Etc., in the Town of Cheektowaga, County of Erie and State of New York.

BRIEF FOR MILSOM RENDERING AND FERTILIZER CO.

The business now conducted by the Milsom Rendering and Fertilizer Company was begun in 1873. (Sten. min. p. 505.)

It has about ten acres of land. Its plant is valued at $125,000, and is located on William street, just past the city line. It manufactures 15,000 tons of fertilizer annually, and employs 103 men. (pp. 505, 506.)

The various railroads entering Buffalo from the west, bring to the city, 1,200 carloads of cattle, sheep, horses hogs, etc., per week which are received at the stock yards, being about seventy-five acres in extent, located on William street, within the city, about one mile west of the city line. (p. 542.)

Some of the hogs, etc., die in transit, averaging 250 to 300 head per week. (pp. 546, 543.)

This dead stock immediately on arrival is unloaded from the cars, and most of it sent to the Milsom Rendering Works, which keeps wagons in waiting for it. (p. 543.)

There are no other means of disposing of it. (p. 547.)

On arrival at the Milsom Rendering and Fertilizer Works, this stock in common with all other stock is treated with disinfectants. (pp. 509, 805.)

These disinfectants are used freely. (p. 527.) So freely, that flies, usually swarming about such places, will not stay there, their absence is noticeable. (pp. 599, 813, 814.)

The material for rendering is placed at once in large hermetically sealed iron tanks, five feet in diameter, fourteen feet in heighth, of which there are eleven. (pp. 506, 507.)

These tanks are capable of taking care of all the stock received at the works, on arrival, a force of men being employed sufficient

to handle it without delay, nothing being kept out of the tanks over two hours. (p. 508.)

The rendering works are not operated at night. (p. 516.)

But four men are left on duty to put into the tanks any carcasses which may arrive there in the night. (p. 521.)

When carcasses are put into the tanks, they are treated with disinfectants, and steam is turned on to the extent of from forty to sixty pounds pressure, and the material is thus thoroughly cooked. (p. 509.)

Killing all germs and spores. (pp. 829, 878.)

Each rendering tank has an exhaust pipe leading into a deodorizing apparatus (p. 539), through which the steam and gasses have to pass and by which they are completely deodorized. (pp. 539, 809, 810.)

Even Dr. Vandenburg says this appliance does its work very effectively. (p. 767.)

And the overflow goes down into the sewer. (p. 769.)

When a tank of animal matter has been thoroughly cooked it is allowed to cool off, the grease is drawn off by means of stop-cocks, the tanks are then flooded with cold water to raise any remaining grease to the same stop-cocks; when all the grease that can be got in that way is drawn off, the tank is cooled off to a temperature of about eighty degrees, and the contents are then discharged into open vats below the tanks, and treated with sulphuric acid, which separates any remaining grease from the meat and bones. (pp. 509, 510.)

The smell is not objectionable. (p. 510.)

Dr. Hill says, that at one of his visits when the rendering tanks had just been discharged he observed the odor of cooked warm meat, that was the only perceptible odor. (p. 808.)

The cooked material is then taken to the dryers and then treated with a solution of sulphite of iron, etc., (p. 510), and then put in dryers and dried.

The disinfectants are added not merely to take care of any odors which might otherwise be noticeable, but as an element of profitable manufacture. (p. 523.)

The material comes from the dryers in a granulated state, largely powder, with no offensive odor. (p. 511.)

Pains are taken to make the operation of rendering as cleanly as possible.

The floors are scrubbed daily, giving them a solution of disinfectant. (p. 511.)

The wagons are washed before going out. (p. 511.)

The white-wash brush is used freely, one man being employed principally in white-washing. (p. 512.)

The liquor water which is evaporated is pumped into what is known as the "stick-room," and then undergoes concentration.

This stick-room is a closed room, dark. A conduit leads from it to the boilers, a fan operates in this conduit, and the vapors and air from this stick-room are drawn under the boilers and burned. (p. 806.)

Outside of the stick-room no odors are observed. (p. 807.)

The air drawn from that room feeds the furnace under the boiler, and this suction conduit is the only thing which furnishes air for the combustion of coal in that furnace. It requires a large volume of air, and there can be no escape of odors from that room into the atmosphere. (p. 815.)

The Milsom Rendering and Fertilizer Company, also manufacture sulphuric acid for use in its business (p. 516.)

Dr. Hill states (pp. 810, 811), what examination he made of vegetation in the vicinity of the works to find traces, if any, of the presence and action of gases from the acid plant, but found none.

He stated (pp. 812, 813), the conditions ruling on Wednesday, August 6th, when the committee sat at the Lackawanna Hotel, and that such conditions were exactly the ones which should have given us the odor of the brown or yellow fumes at that distance, if they were present in any quantity.

No such odor was perceptible, the doctor paying special attention to its detection. (p. 813.) Although the yellow fumes were escaping. (p. 821.)

He went on the roof of the building; at a distance of twenty-five feet from the pipe where the gases escaped, he could detect

them, but the odor was not disagreeable at that distance. The fumes act more as a disinfectant than anything else in the quantities in which they are discharged there, and do not injuriously affect the health of anybody. (p. 826.)

Dr. J. F. White, who is in charge of the Buffalo Chemical Works, made an examination of the plant of the Milsom Rendering and Fertilizer Company, and he corroborates the statements of Dr. Hill. (p. 834.)

And he also says the fumes from the acid house in the quantities in which they escape are a positive benefit to the atmosphere in that locality. (p. 834.)

From these facts it is manifest, that the operations of the Milsom Rendering and Fertilizer Company, are properly carried on.

That the plant is sufficient for the business of the company. That all animal matter is promptly disposed of, by effectual methods, with due regard to cleanliness.

And that such are the facts is likewise attested by the further facts that men have been employed in these works for long periods, some for twelve years, some for ten years, seven years, and so on, down for shorter periods. None have been sick. None have had sore hands or fingers. (pp. 515, 516.)

Tests were made to discover the presence of hydrofluoric gas, but none was discerned. (p. 887.)

We have before us now the manner in which the Milsom Rendering and Fertilizer Company conducts its business, and it does not seem to be subject to any criticism.

The officers of the town say that the Milsom company has always complied with all the suggestions and requirements of the authorities. Mr. Windsor says the same, and adds that this has been done at considerable cost; indeed, it can not afford to jeopardize its interests by careless performance of its work, or inattention to sanitary requirements of any kind.

Keeping these facts in mind, let us examine the testimony of the complainants.

E. C. Green says (p. 34), that he perceived a tremendous sour smell, and on page 35 he says, the smell most obnoxious to him

comes from the Baynes Garbage Crematory, a sour acid smell, exceedingly pungent, that nauseates right along.

George Meadway, says (p. 44), he detects the burning of vegetable matter, a sour acid smell, as if you had a swill barrel for five or six months and just moved it. He thinks the prevailing smell is burned garbage. The most frequent smell is the garbage rendering. (p. 49.)

Henry Hartsell says (p. 55) it smells like burning meat or garbage.

George Faber says (p. 66), that the odor is like that of a dead carcass.

On page 72 he says the garbage works smells very offensively, like burning swill, and that comes very frequently.

Robert Ashman says (pp. 92, 94), that the swilly smell comes from the crematory, and that the burning of decayed flesh must come from the rendering works, but he couldn't state that any came from the Milsom works. (p. 93.)

Right here we will cite the testimony of Mr .Windsor, that the only fuel used in the Milsom works is coal; no offal or other matter is burned. (p. 526.)

And attention ought to be called to the fact that the Baynes Garbage Works did not call any witness familiar with the everyday working of the plant, so it could not be learned from cross-examination how much garbage and refuse was burned in their furnace. (pp. 849, 850.)

George Weiser, is a railroad clerk in employ of Lackawanna railroad. (p. 97.) His business for two years past has taken him to the Milsom works once or twice a month. He says he never observed anything very bad there, that things were cleanly and in good condition. (p. 102.)

He says that during the two years he has been familiar with the Milsom works they have been in as cleanly and good condition as he could keep them himself if he was in the business. (p. 103.)

And he has not observed any offensive smells inside the works. (p. 103.)

He says he never observed the smell of rotten eggs. (pp. 103, 104.)

But that the smell (referring to the smell prevailing in neighborhood), is like a lot of old trash mixed up, like an old sour swill barrel. (p. 104.)

He has noticed the yellow fumes, at the acid plant, but can't say that he ever noticed any smell from them. (p. 105.)

This man is more familiar with the Milsom Rendering and Fertilizer Company's plant than any other witness called by the complainant, he knows whereof he speaks, and his testimony establishes the fact that the odors of which the people complain find their origin elsewhere than in the plant of the Milsom company.

Charles H. Wright says there are three distinct smells. (p. 114.)

First. A smell of rotten animal matter.

Second. A smell of rotten vegetable matter.

Third. A smell like burning up old bones and scraps in a stove.

Right here let us call attention to the fact that at the rendering establishmens of McGuinness, and of Scheid & Fechter, and of Betts Bros., the rendering is done in iron tanks, but the exhaust from these tanks is into the open air. No means for deodorizing the gases are in use in these plants (as in the plant of the Milsom company), but they escape into the atmosphere, the tankage is also air dried (p. 764), and these facts furnish an adequate cause for the "dead animal" smell that some of the witnesses speak of. See testimony of Vandenburg, (pp. 761 to 767, inclusive).

Mrs. George Weiser (p. 116), describes the smell as a sour smell, sometimes like burning grease. She never noticed the smell of dead animals.

Mrs. Green says (p. 127), that the sour smell is the worst.

Charles LeVan says, that a sweet sickish smell comes from the rendering works, combined. (p. 136.) But that the sour smell like burning swill, comes from the garbage works. (p. 139.)

The sweet, sickish smell he further describes as being like decayed animal matter being boiled or cooked some way. (p. 140.)

He says he saw at McGuinness' plant four dead horses, that one of the tanks was open, about half-full of dead animal matter, and the smell was awful. (p. 142.)

There is no opportunity for anything of this kind to occur at the Milsom plant.

Myron D. Dean says (p. 149), that "that unearthly, sickening smell" comes from the garbage works.

That the others have a smell, but the unearthly smell, enough to kill a person comes from the garbage works. (p. 149.)

In respect to the Milsom works he says he has traced odors there but nothing more than would naturally arise from the cooking. (p. 154.) And which would neither kill nor nauseate. (p. 155.)

Robert P. Horlock says (p. 158), "to my honest conviction the smell is from the garbage crematory."

John P. Barry says the smell from the garbage factory was the worst, a sour acid smell. (p. 172.)

So it appears from the testimony of all these witnesses that the smell of which they complain most is a smell not produced in or by the Milsom Rendering and Fertilizer Works.

And this is corroborative of the testimony of Mr. Windsor, Mr. Weiser, Dr. Hill and Dr. White, that the odors found at the Milsom works are not offensive, and that the operations of that company are, in fact, as stated by our witnesses, carried on in a cleanly fashion, with due regard to sanitary requirements.

The witnesses for petitioners say they are annoyed by certain smells.

We can not say to the contrary, but we do say that their annoyance is not chargeable in any wise to the Milsom company.

And in this we are borne out by the testimony in the case, and are confident that the examination which the committee personally made of our establishment will confirm this claim.

It is unfortunate for the Milsom company that the other rendering establishments, which make use of imperfect appliances and methods, and the garbage works, are located in its immediate

Was our company the only one in operation there we are confident that no complaints would have been made and this proceeding would never have been instituted, nor would occasion have existed therefor.

The testimony of Vandenburg shows a total lack of appropriate appliances in the McGuinness factory and also in the factory of Scheid & Fechter. These two concerns which pour forth the foul steam and gases from their rendering tanks into the open air, fully account for whatever odors of dead animals, or of "cooking decayed flesh," may be present in that neighborhood, which, however, are outranked in smell by the "sour swill" smell, as testified to by a dozen or more of the complaining witnesses.

In reference to the general situation, the testimony of every person interrogated on the subject, whether town officer, physician, milkman, grocer or other resident, is to the effect that the odors prevalent in Cheektowaga have not caused or aggravated any disease. The public health has not been affected, and is not endangered by them.

The books are full of cases holding that where in the carrying on of certain trades, gases, smells or noises are created to the discomfort or annoyance of neighboring residents, that the same are nuisances, and the proprietors must respond in damages to the persons injured thereby. But these cases do not apply to the questions involved in this present investigation.

The question here, is whether or not the trades carried on in Cheektowaga so affect and endanger the public health as to warrant the interference of the State.

What is the proof?

A few persons have been nauseated.

No diseases have been produced.

No diseases have been aggravated.

No deaths have occurred.

Dr. McPherson, formerly health officer of the town, who has practiced medicine in that locality for twenty-two years, testifies to such effect. (p. 654.)

So does Dr. Miller, the present health officer. (p. 689.)

So does John Stock, supervisor, who also says that the health of Cheektowaga compares favorably with the health of the remainder of the county, and that the death rate in Cheektowaga is about twelve in 1,000, as against 16.76 in Buffalo. (pp. 903, 904.)

Jerome Ryan, the assessor, swears that he has known of no sickness caused by the odors from the factories.

And every witness interrogated on the subject says the same thing, except that some of the witnesses called by the petitioners say they have been nauseated.

Do these facts present a case which calls upon the authorities of the State to take any action?

Can this committee say, from the testimony adduced, that the security of life or health is endangered by the state of things existing in Cheektowaga?

If what exists in Cheektowaga is a menace to life or health there, it would equally endanger life and health in any other neighborhood. The business is a necessity to life and health in Buffalo. The dead cattle and the garbage must be disposed of, none of the witnesses can suggest a locality where this work can be done to the annoyance of fewer people than in this sparsely settled district of Cheektowaga, where a great many of the residents are employed in these very factories and suffer no inconvenience from them.

The Milsom Rendering and Fertilizing Company, recognizes the necessity for conducting this business in the most approved methods, it has large interests at stake, and can not afford to do otherwise than to mimimize the offensiveness of this business.

We believe that this has been done in the course of the business of this company and, therefore, ask the committee to report and the State Board of Health to find as a fact:

First. That the business carried on by the Milsom Rendering and Fertilizer Company is not, nor is its plant, nor the methods of operating the same, a nuisance affecting the security of life or health.

And as a conclusion therefrom:

Second. That there is nothing in the business of the Milsom Rendering and Fertilizer Company, nor in the manner in which it

is carried on, nor in its plant, nor in the methods of its operation, which calls for any action on the part of the State Board of Health or of the Governor.

We think we are justly entitled to a report, or finding, of the above tenor.

Should the committee, however, find that some action should be taken in reference to the other establishments in the locality in question, then in order that we may not be put in jeopardy a second time, we should be glad to have an inspector appointed to inspect these several factories from time to time to see that all operations are properly conducted, and all regulations fairly observed, to whose visitation we will voluntarily subject our plant, and to whose reasonable salary we will contribute what may be determined to be our fair proportion.

Respectfully submitted,

DAY & ROMER,

Attorneys for Milsom Rendering and Fertilizer Company, No. 202 Main street, Buffalo, N. Y.

In the Matter of the Investigation Into the Alleged Nuisances of Carrying on the Business of Rendering Dead Animals and Slaughter-house Scrap, Cremating Garbage, Bone Boiling, Manufacturing Sulphuric Acid, Fertilizers, Etc., in the Town of Cheektowaga, County of Erie and State of New York.

BRIEF OF BAYNES GARBAGE AND CREMATORY WORKS.

I.

By section 3 of chapter 661 of the Laws of 1893 provision is made for the organization of the State Board of Health. It provides that five members shall constitute a quorum. It provides for the appointment of committees and for the delegation to them of power and authority to do the work committed to them.

Section 4 provides the general powers and duties of the board and section 5 the duties in regard to vital statistics. And section 6

then provides that the State Board of Health shall have all necessary powers to make examination into nuisances or questions affecting the security of life and health in any locality. And then follows the specific mandatory provision, "Whenever required by the Governor of the State it shall make such an examination and shall report the result thereof to the Governor within the time prescribed by him therefor."

There is a question of great doubt whether the previous sections allowing a delegation of power to a committee of the State board have any application to the above provision of section 6.

"Nothing short of the most positive and explicit language" can justify a holding that the Legislature intended to confer such a power on the committee instead of the State Board of Health.

Thompson v. Schermerhorn, 6 N. Y., 96.

"It is a general rule that such power must be exercised in strict conformity to the law, and any interference by public bodies or officials with the property rights of the citizen can only be justified by clear authority of the statute."

Birdsall v. Clark, 73 N. Y., 77.
Phelps v. Mayor of New York, 112 N. Y., 221.

II.

It will not be claimed that the power given by section 6 is an unrestricted power. It has been expressly held otherwise.

See Babcock v. City of Buffalo, 56 N. Y., 272.

III.

It is assumed that the action of the State board in this matter is limited to the question whether the institutions complained of are so conducting their business as to actually endanger the public health in the town of Cheektowaga.

This limitation of the powers of the board is warranted by the terms of the statute, as well by the construction given to similar statutes by the courts.

See Underwood v. Green, 42 N. Y. 142.

Section 6 of chapter 661 of the Laws of 1893 clearly is applicable only to such nuisances as are dangerous to life or health.

Mayor of New York v. Board of Health of New York, 31 How. Pr., 385-394.

IV.

It may also, we think, be assumed that the power of the Governor, under section 6, supra, acting upon any report which the State Board of Health may make to him in the matter, will be limited to the making and enforcement of such orders only as will prevent a continuance of a public nuisance detrimental to public life and health, and which orders, in themselves, will be limited to the prevention, upon the part of the owners of the properties complained of, and of a use of said properties, in such manner as to constitute a nuisance.

The Legislature has given the Governor this power by the terms of the statute in question.

"But the Legislature can not go further. It can not decree the destruction or forfeiture of property used so as to constitute a nuisance as a punishment of the wrong, nor even, we think, to prevent a future illegal use of the property, it not being a nuisance per se, and appoint officers to execute its mandates. The plain reason is that due process of law requires a hearing and trial before punishment, or before forfeiture of property can be adjudged for the owner's misconduct. Such legislation would be a plain usurpation by the Legislature of judicial powers, and under guise of exercising the power of summary abatement of nuisances the Legislature can not take into its own hands the enforcement of the criminal or quasi-criminal law."

Lawton v. Steele, 119 N. Y., 239.

V.

And again, "Boards of health, under the acts referred to, can not, as to any existing state of facts, by their determination, make that a nuisance which is not in fact a nuisance. It is the actual existence of a nuisance which gives the jurisdiction to act."

People v. Board of Health, 140 N. Y., 7.

VI.

And, again, it is a well-settled proposition of law "that where there is a want of authority to hear and determine the subject-matter of the controversy, an adjudication upon the merits is a nullity and does not estop even an assenting party."

Beardslee v. Dodge, 143 N. Y., 165.

VII.

The question now is, in the light of the foregoing principles and authorities, what action, if any, should the State Board of Health take in reference to the respondent, the Baynes Garbage and Crematory Company, so far as the testimony taken before the committee seems to authorize, and by way of report to the Governor, as contemplated by section 6 of the act of 1893, or otherwise?

VIII.

By the report of Dr. Van Denbergh, the expert chemist employed by the petitioners herein, made on December 17, 1894, page 13 of stenographer's minutes, it was stated "that almost the entire volume of effluvia is discharged by the three works on the north side of William street, beyond the city line."

He names the works, and this respondent is not one of them.

IX.

It will not be disputed that the Baynes Garbage and Crematory Company have, at a great expense, built a plant and entered into a contract with the city of Buffalo for the destruction of the garbage, and have been for a long while, and is now engaged in the performance of its duties under this contract.

The manner in which the garbage is delivered was described by the superintendent of streets, John O'Shea. (Sten. Min., 834.)

The manner in which this garbage is destroyed by this company is described at length by Dr. Thomas B. Carpenter. (Sten. Min., 838.)

It is not disputed but that the system employed, being the Merz, so called, modified, is the best known to science.

It was the opinion of Dr. Carpenter "that there were no gases or effluvia of any kind emitted from any part of this factory that could be considered prejudicial to public health in any way." (Sten. Min., 845.)

The witness described how the odors from a receiving tank might be prevented from escaping into the atmosphere. (Sten. Min., 853.)

It was also the opinion of Dr. Wende, the health physician of the city of Buffalo, that the Merz system was one of the best known to sanitarians (Sten. Min., 861), and it was also his opinion, after examination, that there was nothing to show that there was any prevailing sickness in the neighborhood of the crematory in excess of any other locality. "In fact, some of the preventable diseases have been even less there." (Sten. Min., 861.)

It was also the opinion of the witness that under all of the conditions and circumstances existing there was no locality in the United States or the State of New York where the garbage works could be conducted with less annoyance, inconvenience or injury to the public health than where they are now established. (Sten. Min., 866.)

It was also the opinion of this witness that he did not consider this establishment a nuisance or menace to public health, as now conducted. (Sten. Min., 871.) And the witness gives his opinion as to the proper remedy to be pursued. (Sten. Min., 871.)

The witness, Dr. Edward Clark, was also of the opinion that the system in use by the Baynes Garbage Company is the best system existing. (Sten. Min., 880-81.) He also gives his opinion as to the remedy to be pursued. (Sten. Min., 882.)

The witness John Stock, who has been supervisor of the town of Cheektowoga for six years and president of the board of health, was sworn and examined by Chairman Cassidy. (Sten. Min., 889.) He swears that some complaint had been made about these odors, but could not remember any special complaint within the last year; and the board had ordered many appliances to be used in these works. (Sten. Min., 891.) And he further says that no complaint had been made to the local board within the last year by

citizens in the vicinity of the works. (Sten. Min., 894.) He thinks that the local board is competent to deal with the proceedings of abating these nuisances. (Sten. Min., 896.) He says that the different establishments have complied with the instructions of the board. (Sten. Min., 898-902.) The death rate of the town is 12 per cent.; that of the city of Buffalo, in 1894, was 16.76. (Sten. Min., 904.) All of the respondents expressed entire willingness to acquiesce and comply with any reasonable regulation or recommendation of the State Board of Health. (Sten. Min., 906-7.)

The witness Herrick produced a paper with seven pages of names of householders and heads of families within a radius of a mile, certifying that they did not consider the Baynes Garbage and Crematory Company a public nuisance, or detrimental to public health (Sten. Min., 608).

And Joseph Nehrbass, who has resided for nineteen years within 172 feet of the crematory, and is a farmer and has a family, testifies that there has been no sickness in his family in consequence of these works. (Sten. Min., 618.)

The witness, George Rainey, who lives one-third of a mile from the crematory, testified generally that he had lived there five years and had no illness in his family on account of the crematory. (Sten. Min., 622.) And there has been no case of fever, or the like, during that time. (Sten. Min., 623.) He is a passenger conductor. (Sten. Min. 624.) He also described the deposit of night soil in that vicinity and the effect. (Sten. Min., 627-8, et seq.)

The witness, John M. Rohr, also testified generally to the same state of facts. He was a dairyman. (Sten. Min., 633.)

The witness, Mrs. Emma Weber, also testified to the fact that she had suffered no illness or inconvenience from the crematory. (Sten. Min., 638.) She was the wife of a person formerly a conductor and now a real estate agent. (Sten. Min., 643.)

And John H. Ludwick testifies generally to the same thing. He is a farmer and passes the crematory sometimes twice a day. (Sten. Min., 644.) Neither he, nor his family, have ever suffered any illness from the crematory. (Sten. Min., 645.)

Of course there is the testimony of many other witnesses called by the other respondents to the same general import, and of the same character, attention to which will undoubtedly be called by the respective attorneys for these establishments, and, therefore, it has not been deemed necessary to present an analysis of their testimony in this brief.

X.

An examination of the testimony of the physicians sworn by the different parties hereto shows a general consensus of opinion that while the odor from the different factories is not a pleasant or agreeable one, yet there has been no epidemic of any kind produced thereby, and no injury to the general health of the public of the town of Cheektowaga, or in the immediate vicinity of these works. See testimony of Dr. McPherson, former health officer of Cheektowaga. (Sten. Min., 651, 654, 655, 658, 661, 666, 671.) And see testimony of Dr. Henry Miller, the present health officer. (Sten. Min., 671, 672, 689.)

And see testimony of Dr. Van Peyma. (Sten. Min., 709-711.) And see testimony of Dr. Grosvenor (pages 712, 716); and see testimony of Dr. Putnam (page 736); and see testimony of Dr. Root (pages 737, 740, 741, 744, 745); and see testimony of Dr. Thoma (pages 746, 747, 749, 750); and see testimony of Dr. Goldberg. (Sten. Min., 753, 755.)

XI.

We have not overlooked the fact that two of the counsel for the petitioners herein, Mr. Rogers and Mr. Jones, have had spread upon the minutes taken by the committee a complaint that each of them, as individuals, have suffered more or less by reason of the stenches and odors coming from some one or all of the institutions on William street. Mr. Rogers says that he can testify to some degree of nausea that has arisen therefrom, and which has existed in his own family (Sten. Min., 11.) And Mr. Jones states as a fact that in passing the works on two occasions the smell has made him vomit. (Sten. Min., 13.)

It is somewhat singular that no such statement was made by the other member of this firm who conducted this investigation before

the committee in behalf of the petitioners. If this gentleman had been willing to go on record as having suffered in a similar manner the committee would probably have felt justified in assuming that there was, so far as that law firm is concerned, at least, a clear case of effluvial nuisance carried on by some one. But inasmuch as he made no such statement and the chairman of this committee has assured the counsel for the Milsom Rendering Works that the statement of Mr. Rogers is not evidence (Sten. Min., 109), we feel that we are justified in excluding from consideration these statements. The committee will also remember that Dr. Putnam understood that Mr. Rogers' trouble came from the Asphalt Company's Works. (Sten. Min., 736.)

XII.

It occurs to us, however, that it is somewhat remarkable that that these two gentlemen, as citizens of Buffalo, having succeeded in conjunction with others, in driving out of the city and into the town of Cheektowaga, the business of destroying the garbage of the city, and being attorneys for the Delaware, Lackawanna and Western Railroad company, a corporation interested in the destruction of a large amount of dead animals, in its possession at the stock yards and elsewhere, and which secures their destruction by delivery to the rendering works, respondents here, should now become so interested in land companies in said town that they are anxious and determined, if possible, to drive the business out of Cheektowaga, regardless of the effect which this may produce, either upon the city of Buffalo or upon their client, the Delaware, Lackawanna and Western Railroad Company.

Is it not also a singular coincidence that nearly every one of the persons sworn by them, to show nausea and vomiting, etc., produced by the vile smells emanating in great part from dead animals delivered as aforesaid to the various works, should be employes of this same railroad company?

XIII.

In conclusion, and by way of summary, we feel justified in claiming here:

1. That the evidence shows beyond any question that the officers of the respondent, the Baynes Garbage and Crematory Company, are so conducting their business that they have not committed and are not guilty of maintaining any public nuisance dangerous to the public health of the town of Cheektowaga or the city of Buffalo.

2. That the interference, asked for by the petitioners herein, upon the part of the State board with this institution, engaged as it is in the destruction of the garbage of a great city, would inevitably tend, in the end, to the establishment of a great public nuisance within said city, and thus jeopardize the life and health of 350,000 people.

3. The evidence shows beyond any question that the local board of health of the town Cheektowaga is able and willing to deal with this question of alleged nuisance, and any action upon the part of the State Board of Health, except in an advisory way, is entirely uncalled for, if not positively illegal.

See People v. The E. G. L. Co., 141 N. Y., 231.

4. There being no evidence that the public health is in danger the petitioners, if they have any real cause of grievance, have an ample remedy by way of civil action and injunction.

Bohan v. P. J. G. L. Co., 122 N. Y., 18.

And for the foregoing reasons we respectfully submit to this honorable committee and to the State Board of Health, that under the provisions of section 6 of chapter 661 of the Laws of 1893, report should be made that so far at least as the Baynes Garbage and Crematory Company is concerned that it does not maintain any public nuisance detrimental or dangerous to the public health, and that said State board so certify to the Governor.

TABOR & WILKIE,

Attorneys for the Respondent, Baynes Garbage and Crematory Company, 85 West Eagle street, Buffalo, N. Y.

BEFORE THE STATE BOARD OF HEALTH.

In the Matter of the Investigation into the Alleged Nuisances, Etc., in the Town of Cheektowaga, County of Erie and State of New York.

BRIEF FOR PETITIONERS.

In accordance with the suggestion of the commission we will make our summing up in this case brief. It does not seem to us that there is anything especially difficult either in the facts or the application of the law to the matter in hand.

FIRST.

As to the facts.

Many witnesses were called and there is some apparent discrepancy in their testimony. This, however, is not surprising, for although the existence of the stenches complained of must be a fact so patent that it can admit of no serious dispute, the persons called to testify, although intending to speak truthfully, do not always speak in relation to the conditions at the same time. Those who smell the stenches speak affirmatively of certain times — those who do not smell them, if there be any such, may be speaking of entirely different times and conditions. Besides, there is a great difference, as everyone knows, in the sensitiveness of observers to disagreeable smells. But it is not necessary to state more in relation to this point.

We submit there can be no serious dispute that the smells from these establishments — some or all of them — constitute a very grave and reprehensible nuisance, not only to the residents of Cheektowaga, but also to the residents of the city of Buffalo. Evidence might have been multiplied almost indefinitely as to the disgusting character of these smells and as to the extent of the district over which from time to time they are distributed. The commission well knows that under certain conditions of the atmosphere, which are likely to prevail through the night more than during the daytime when the sun is shining brightly, and when the air is damp and there is a slight wind sufficient to waft

these odors, they find their way in most offensive degree over c siderable distances, sometimes not less than two or three or fc miles, and sometimes even five. If a heavy wind prevails, t odors are broken up and dissipated, but with a moderate wind a little breeze that is scarcely perceptible, these odors are floa into the windows of thousands. The commission must have h personal experience of these facts. Every visitor to the up part of the city of New York during the past ten years (until late, perhaps), has had experience of the fact and it is notoric among the citizens upon the west side of the city of Buffalo.

It is sometimes difficult to ascertain precisely whence the od come. The odors that greet wakeful people at night are not from one establishment or from one kind of establishment, b from many. Touching the testimony in this case, we will conte ourselves with asking the commission if the testimony is r absolutely clear in their recollection, to refer to the evidence a few of the witnesses called by the petitioners, which, if true (a there can be no doubt of it), proves (1) the existence of these fensive odors for a number of years; (2) that while improvemei have been made in the methods in use at these establishmen and a notably important improvement has been made by the troduction of the sewer, the stenches continue to be offensive i degree to constitute a serious nuisance. Whether that be a nu ance prejudicial to public health, is the point to which attenti will be given further on; but, as we remember it, there is no witness in the case who does not agree that a nuisance exists.

The first witness sworn, Mr. Green in reply to Chairman C sidy, said, he lived about three-quarters of a mile from the r dering works and crematory; he lives in the line of the prevaili winds, and whenever the wind blows in his direction from t south or a little west of south, he gets the smells at his hou He gets them day and night. His family are nauseated by the They are wakened out of their sleep at night. Their appet is greatly impaired by it. They are awakened from their sleep night and compelled to close the windows and sleep in the c fined air of a room not ventilated.

George Meadway, the second witness, has lived in the neighborhood from the fall of 1883. He thinks the smells were then more rank, if possible, than they are now. He says that there were then open sewers (by which he means the ditch, we suppose), carcasses lying around putrid and full of maggots, and the odor immensely strong. Now, however, he says (p. 41) that the "factories have grown," there are more there and the nuisance "is about the same." His family are nauseated. He has a delicate girl, subject to asthma, and she suffers a great deal from the inability to give her pure air. Their appetite has been impaired at times. They are wakened from their sleep and unable to go to sleep again (p. 43). These are not things past, but things of the present. Mr. Meadway lives where he would be likely to get these odors. The wind drifts them into his house.

Henry Hartsell (p. 52) tells a similar story. He has himself "many a time" thrown up his breakfast when he was going to his work (p. 53). He has to close his windows at night (p. 54) and lie, "as it were, in a sweatbox trying to get to sleep." At page 61, in reply to Chairman Cassidy, he says he has been made ill "riding upon his engine."

George Faber (p. 64) tells a similar story.

Mr. Hurd, the proprietor of the hotel (p. 78), tells the same.

And the statements made by these witnesses are not simply as to a time before the sewer was put in or before the alleged improvements were made in methods by these establishments, but they are of the present, of the last year.

We will not go more into detail as to the testimony of the witnesses establishing the nuisance which is complained of. We will content ourselves with a brief reference to the testimony of Dr. McPherson (pp. 649, 654, 655, 658, 661). At this last page we quote the following:

"Q. How far away have you perceived these odors yourself? A. About three miles east of Lancaster.

"Q. Then they would be carried in the air at least 10 miles? A. *Ten miles at least.*

"Q. How recently have you noticed these odors from these factories? A. Inside of two years.

"Q. And then you noticed them at that distance? A. *Within two years, yes, sir.*"

We conclude what we have to say on the existence of the stenches and their extent by simply saying that we think the observation of the commission and the concurrent testimony of the witnesses establishes a serious nuisance.

SECOND.

How is this nuisance created?

It is not necessary for us to contend that this nuisance in its full extent is inseparable from the existence of these odor-producing establishments. We have no doubt that if great care was exercised by everybody having to do with the processes used, there would be very much less of offensive smells given out, but such establishments, we fancy, are rarely managed with the extremest care. It would, perhaps, not be fanciful to assert that there is something in the nature of the business which tends to make the persons engaged about it careless of cleanliness and of offensive smells. The fact undoubtedly is that with entire cleanliness and proper management of these establishments the nuisance would be very considerably mitigated. But it is practically hopeless, we think, to expect such management.

The city of Buffalo drives these establishments beyond its borders, but they only go just outside the line and there sit down where the city of Buffalo is powerless to interfere with them. They are then within other jurisdiction, which must be appealed to. *We believe that they ought to be removed from their present station.* The question before this commission is one which concerns the citizens of Buffalo as well as the citizens of Cheektowaga. The State Board of Health are not confined to the question whether these establishments are detrimental to the health of Cheektowaga. The health of the citizens of Buffalo is equally their care. Probably it will not be long before such extension will be made of the corporate limits of Buffalo as to take in a large part of Cheek-

towaga, and then the city of Buffalo would be able to deal with these institutions through its own officers, but at the present time they must invoke the State Board of Health. (We may say in passing that it is of little use to invoke the action of a local board of such a town as Cheektowaga, for reasons which must be obvious to the commission.)

THIRD.

Further upon the subject of the cause of the nuisances and the means of minimizing them which might be employed by an improvement of methods.

We submit upon that subject the statement of Dr. Vandenburg, concerning which we desire to say that in our judgment the whole matter is so thoroughly within the comprehension of the board that the intelligence and soundness of Dr. Vandenburg's statement can be thoroughly tested by it.

There is, perhaps, a slight odor of professional jealousy about the expert's evidence in this case, but the board is well enough able to say whether there is or is not, and if there is, to make proper deductions on account of it without any further suggestion from us.

FOURTH.

Some attempt has been made to account for this nuisance by laying it off upon the contents of cattle cars and the spreading of night soil. The smells arising from such sources, however, do not answer the descriptions which are given of those which constitute the nuisance of which petitioner's witnesses speak.

FIFTH.

The nuisances complained of are prejudicial to public health.

It seems to us almost to go without saying that a smell so offensive that it disturbs the natural rest; wakes people up out of sound sleep; nauseates persons having delicate stomachs to the point of vomiting; compels the closing of windows for the purpose of excluding the odors, and so deprives people of the fresh air

which they should have in their houses and which disturbs the general comfort of body and mind of the victims, is prejudicial to public health.

The idea of the defense seems to be that persons who have not stomachs like horses and who can not sleep like logs when such stenches as those proved in this case are invading their houses, have no right to be regarded as a part of the public. The delicate people and people of sensitive nervous organizations and people who have trouble in sleeping even under favorable conditions, they seem to think, are not to be regarded. The stenches are a nuisance — this they have to admit —but they are not prejudicial to public health, they say. They are not nice — no one of the defendants' witnesses is willing to say that he would like to live in the neighborhood of these establishments, but they say they are not nuisances to the public health. We respectfully submit that the position assumed by the defense upon this subject can not be maintained.

We have called a few witnesses to show how they have been inconvenienced and injured by the existence of these smells. Does the commisison doubt that there were hundreds of others who might have been called if we knew where to look for them or if they were willing to make public complaint. It is a notorious fact that many people — a large majority of people — will submit to impositions of this sort without complaint rather than to incur the notoriety and take the trouble to prosecute the authors of them. These neighborhoods doubtless have their proportion of delicate people; people who do not sleep well; people who have slight appetite for food, and the same cause which has acted upon the few whom we have called doubtless has had its effect upon all the others. It is notorious that the people of New York submitted for years and years to very grave nuisances from the rendering and oil establishments in their neighborhood without taking any measures for their correction. The citizens of Buffalo have done the same thing, but at last they have appealed to the State Board of Health for assistance. Of course, the case has been stoutly defended, but if the proper relief

ot granted here and now, the matter is simply reserved for
ire trouble and future proceedings.
n this connection, just one word with reference to the odium
ch the defense have sought to impose upon this proceeding be-
se parties who are large owners of land, presumably for sale,
ire to get rid of these nuisances. Why, the very suggestion,
eems to us, is in a collateral way strongest proof of the serious
racter of this nuisance. The men who want to make money
the sale of lands are the very men to go to to ascertain whether
se establishments are detrimental to public health. The fact
t they are so, greatly interferes with the value of their land.
course, if there were no people now existing who were harmed
the nuisance this board would, perhaps, not sit merely to ex-
ise preventive measures so that this territory might be freed
n a nuisance which prevents its being brought into the market
cessfully, but that is not the case. These institutions are just
r the city line, and there is a very considerable population in
eektowaga about them, within reach of their offensive odors.
n this connection we will refer for a moment to the report of
Ballard, referred to in the paper by Dr. Vandenburg, which
ubmitted herewith, and with which the Board of Health is
btless familiar. We refer especially to pages 117 *et seq.*,
ich contain an elaborate consideration of the question, "To
at extent offensive trade effluvia are to be regarded as injurious
public health?" which fully sustains the position of the peti-
ers in this proceeding. It shows not merely the positive in-
y to health which may be caused by such effluvia, but it meets
l disposes of a fallacy which has been hinted at by the defense
his case which would impute to such effluvia disinfecting quali-
s. Considering the character of these Cheektowaga smells it
difficult for one with any sense of humor to consider such a
ggestion seriously. Dr. Ballard has said all that could be de-
ed to be said upon the subject. See, also, report New York
ate Board of Health, 1882, page 337 *et seq.*
At the risk of substantial repetition, we would ask any member
this board to imagine, if possible, that he resided with his

family within the line of these odors as the wind from the south wafts them some night when the thermometer is in the 70's and the windows of his bedroom are open. Then he may imagine his wife awakened and nauseated by them; himself awakened and disturbed by them; the children awakened and perhaps nauseated; an hour or two or perhaps even more of the night broken into by the disturbance—the smells becoming so intolerable that the windows have to be closed and the family sweltering in the summer heat. Then let him put to himself the question whether he thinks that condition of things is not prejudicial to the health of himself and his family. But enough on this subject.

Finally, we have already said that, in our judgment, these establishments ought to be removed. It is but a question of time—and a brief time we think — when the demand of the citizens of Buffalo and Cheektowaga will absolutely compel this. Such establishments, we submit, should be a number of miles away from such a city as this and from any considerable population. They should be equipped, wherever they are, with every known appliance for minimizing the odors which proceed from them.

It may be, however, that the board is not prepared at this time to recommend the removal of these establishments, but we can not for a moment doubt that it will make such directions with reference to the improvement of methods and machinery as will minimize very greatly the extent of the nuisance. If such improvements are not made and made promptly, any establishment in default ought to be closed up.

On the hearing some suggestion was made as to the propriety of a public inspector being appointed for these establishments. In our judgment, the appointment of such an inspector would practically afford no relief at all to the public.

We subjoin memoranda made by our Mr. Rogers in relation to the jurisdiction of the State Board of Health, though, perhaps, it is quite unnecessary to do so.

ROGERS, LOCKE & MILBURN,
For petitioners.

In the Matter of the Nuisances at Cheektowaga.

MEMORANDUM.

FIRST.

The laws in relation to the public health were practically codified by chapter 661 of the Laws of 1893, under what is known as the Public Health Law. The State Board of Health was provided for (section two) as well as the local boards of health in cities, villages and towns.

Article 2 of the statute which refers to local boards of health is not applicable to the cities of New York, Brooklyn, Buffalo, Albany and Yonkers.

SECOND.

The question which I am specially investigating is as to the nature of the jurisdiction of the State Board of Health, and especially whether a proceeding can be taken before it in the first instance which is practically adequate for the relief sought.

Or, must the proceeding be taken before the local board in the first instance and its decision brought before the State Board of Health upon the review?

(a) Upon examination of the act, the only provision which I find in the nature of a review of action by a local board is contained in section four of article one, and is as follows:

"The State Board of Health may reverse or modify an order, regulation, by-law or ordinance of a local board of health concerning a matter *which in its judgment affects the public health beyond the territory over which such local board has jurisdiction.*"

That is to say, if a proceeding were taken before a local board of health for the suppression of a nuisance in Cheektowaga, which nuisance affected the public health in the city of Buffalo, and the decision of the local board was not satisfactory, the matter might be brought before the State board under section four of article one, and the decision of the local board reversed or modified and then as reversed or modified such proceedings would be taken thereafter as is provided in the case of a proceeding for the removal of a nuisance before a local board.

(b) The fact that no other provision is made for the review of the decision of a local board, makes it quite apparent that the authority given by sections four and six of article one, confers upon the State Board of Health an original jurisdiction to entertain such a proceeding as is now before them.

Section four, in relation to the general powers and duties of the board provides as follows:

"The State Board of Health shall take cognizance of the interests of health and life of the people of the State, and of all matters pertaining thereto. It shall make inquiries in respect to the causes of disease, especially epidemics, and investigate the source of mortality and the effect of localities, employments and other conditions upon the public health."

* * * * * * * *

Section six in relation to nuisances provides as follows:

"The State Board of Health shall have all necessary powers to make examination into nuisances or questions affecting the security of life and health *in any locality whenever required by the Governor of the State.* It shall make such examinations and shall report the results of them to the Governor within the time prescribed by him therefor. The report of every such examination when approved by the Governor, shall be filed in the office of the Secretary of State, and *the Governor may declare the matters public nuisances, which may be found and certified in any such report to be nuisances, and may order them to be changed, abated or removed as he may direct.* Every such order shall be presumptive evidence of the existence of the nuisance, and the Governor may, by a precept under his hand and official seal, require the district attorney, sheriff and other officers of the county where such existence is maintained to take all necessary measures to execute such order and cause it to be obeyed, and the acts of any such officer in the abatement of such nuisance requisite or necessary for such abatement, shall be lawful and justified, and the order of the Governor a sufficient protection. The expenses of the effecting of such abatement shall be paid by the municipality where the nuisance occurs, and shall be a debt recoverable by such municipality of all persons maintaining

such nuisances, and shall be a charge upon the land where such nuisance is maintained, which may be enforced by a sale of such land to satisfy the same."

Obviously these provisions are for direct proceedings. They call for an original jurisdiction, and while the local boards of health have also a jurisdiction to be exercised in the manner pointed out by the statute, such jurisdiction does not in any manner oust that which is conferred upon the State Board of Health by sections four and six of article one, to which I have alluded.

(c) By reference to section thirty-two of article two, it will be found that these provisions in article one *are* applicable to the cities of New York, Brooklyn, Buffalo, Albany and Yonkers. The exception and limitation as to those cities made by that section are *only as to article two*, and do not refer at all to article one.

THIRD.

The nuisance in this case exists in the town of Cheektowaga. The local board in Cheektowaga is the only local board that has the power to abate it. We understand that these establishments were placed just outside the city line to prevent action by the city board of health with reference to them, but they are substantially as detrimental to the health of the citizens of Buffalo as they would have been if located within the city. I find no difficulty in the State board taking such action in this matter as shall be effective, and in the inquiry which they shall make I see no reason why they should not inquire as to the effect upon the health of citizens of Buffalo as well as to the effect of the nuisance upon the health of citizens of Cheektowaga.

Their authority seems to be entirely clear and definite.

Orders of the Governor in the Matter of Nuisances in the Town of Cheektowaga.

STATE OF NEW YORK:

EXECUTIVE CHAMBER,
ALBANY, *November* 12, 1895.

Whereas, On the 14th day of June, 1895, Henry W. Box and other citizens living in and near the town of Cheektowaga, in the

county of Erie, presented a verified petition to the Governor of the State of New York, complaining of certain nuisances alleged to exist in the town of Cheektowaga, which nuisances it was therein alleged, affected the life and health of the people residing or being in the vicinity of such nuisances, and praying that an order be made to the State Board of Health, requiring them to make the necessary examination thereof, with the view to having the nuisance complained of abated and removed; and,

Whereas, On the 17th day of July, 1895, the Governor transmitted said petition to the State Board of Health, requiring the said board to investigate the alleged nuisances and report the result thereof to him on or before the 1st day of September, 1895; and,

Whereas, The State Board of Health did thereafter examine into said alleged nuisances, and were attended upon such examination by the attorneys for the petitioners and by representatives of some of the persons interested (all persons interested therein having been previously notified of such examination and their attendance having been requested), and did take testimony as to the existence of said nuisances, and did report to the Governor the results of their examination, together with evidence taken thereon, which report, with the approval of the Governor indorsed thereon, was duly filed in the office of the Secretary of State, on the 12th day of November, 1895, by which report it appears that divers offensive trades and nuisances are carried on in the town of Cheektowaga, near the city of Buffalo, in the county of Erie, by the following-named persons or corporations, viz.: The Baynes Garbage Crematory, the Milsom Rendering and Fertilizer Company, the Scheid & Fechter Rendering Works, the Betts Brothers Rendering Works, and the McGennis Rendering Works,

Now, therefore, I, Levi P. Morton, Governor of the State of New York, in pursuance of the statute in such case made and provided, do hereby declare the business and trades maintained and carried on in the town of Cheektowaga, in the county of Erie, State of New York, by the Baynes Garbage Crematory, the Milsom Rendering

and Fertilizer Company, the Scheid & Fechter Rendering Works, the Betts Brothers Rendering Works, and the McGennis Rendering Works, to be public nuisances, and I do order and direct that the manner of conducting such offensive business and trades be forthwith changed in the following particulars, to wit:

First. That the garbage, refuse materials, dead animals and animal matter collected therein and hereafter brought therein be properly disposed of by and through the so-called reduction system.

Second. That the further conduct of the establishments above named shall be done in the most approved and scientific manner, to remove as far as possible any danger to life and health of persons in the vicinity thereof.

Third. That each of said establishments engaged in rendering dead animals and in the disposal of garbage, shall so arrange the buildings used therefor as to confine the gases and effluvia resulting therefrom until properly disinfected or said gases and effluvia shall be burned by the use of suction conduits supplied with fans and leading the same to the fires.

Fourth. That the State Board of Health appoint an inspector whose duty it shall be to enforce such sanitary rules and regulations as may be prescribed by the board for the conduct of the business carried on by said works, said inspector to hold office during the pleasure of the State Board of Health, and shall be paid such compensation by the persons and corporations carrying on the business and occupations herein referred to, and said inspector shall be required to visit and make a careful examination of all said establishments at least twice in each week, in such manner as the State Board of Health may direct, and as often in addition thereto as the Board of Health may prescribe; that it shall be his duty to report to the State Board of Health weekly from the 1st day of June to the 1st day of November in each year, and monthly at other times, upon the general sanitary condition of each of said establishments, and also report to said board all violations of the sanitary rules and regulations prescribed by them, within 24 hours after said violation.

Fifth. In default of compliance with this order by the persons or corporations hereinbefore named, such further order may issue, upon the application of the State Board of Health, as may be necessary to secure the removal of the nuisances complained of.

Given under my hand and the privy seal of the State, at the capitol in the city of Albany, this 13th day of November, in the year of our Lord one thousand eight hundred and ninety-five.

[L. S.] LEVI P. MORTON.

By the Governor:

ASHLEY W. COLE,
Private Secretary.

Notice of Proof of Service of the Order of the Governor in the Cheektowaga Matter.

STATE OF NEW YORK:

EXECUTIVE CHAMBER,
ALBANY, *November* 22, 1895.

Hon. BAXTER T. SMELZER, *Secretary State Board of Health, Albany, N. Y.:*

Dear sir.— I have to inform you that the Governor is to-day in receipt of proof of service of his order in the Cheektowaga matter of 13th inst. upon the following-named parties:

The Milsom Rendering and Fertilizer Company, the Betts Brothers Rendering Works, the McGennis Rendering Works, the Baynes Garbage Crematory, the Scheid & Fechter Rendering Works.

Very respectfully,

ASHLEY W. COLE,
Private Secretary.

Rules and Orders of New York State Board of Health, in the Matter of the Rendering and Garbage Cremating Establishments in the Town of Cheektowaga, County of Erie, State of New York.

Rules and orders of the New York State Board of Health, concerning the rendering of dead animals, carcasses, fish or garbage,

ther animal or vegetable matter or substances, in the town heektowaga, county of Erie, State of New York, by the Baynes bage Crematory, the Milsom Rendering and Fertilizing Com- y, the Scheid and Fechter Rendering Works, the Betts Broth- Rendering Works, and the McGennis Rendering Works, or by other person or persons, firm or corporation conducting such nsive business and trade in the aforesaid town and county.

irst. That each of said establishments, or any others, engaged he aforesaid business of rendering dead animals and in the osal of garbage in the aforesaid town and county, shall so nge the buildings used therefor as to confine the gases and ıvia resulting therefrom until properly disinfected, condensed obviated, or said gases or effluvia shall be conducted through tion conduits, provided with fans, leading to the furnaces where l gases and effluvia shall be burned until freed from all objec- ıable smells.

econd. That each of the aforesaid establishments, or any others he aforesaid town and county, shall hereafter render or cremate dead animals, carcasses, fish, garbage or other animal or vege- le substances in hermetically sealed air-tight tanks or vats, and gases and effluvia engendered thereby be conducted from said dering tanks or vats into and through other air-tight vessels ıtaining deoderizing agents in sufficient quantity, and of such ılity and strength as shall thoroughly and completely deodorize l gases and render them free from all objectionable smells, and gases or effluvia shall be permitted to escape into the air from of said rendering tanks or vats, or apparatus connected there- h, until the same shall have been thoroughly and completely dorized.

hird. That each of the aforesaid establishments, or any other, ll contract and arrange to collect and convey all garbage and d animals, or other vegetable or animal substances or matter atsoever, in tightly-closed packages, tightly-closed barrels or htly-closed boxes, from the place of obtaining such garbage, d animals, or vegetable or animal substances to the aforesaid dering establishments, and such tightly-closed packages, bar-

rels or boxes shall be conveyed into the apartments containing the rendering tanks or vats, and there the contents of the tightly-closed packages, barrels or boxes shall be emptied directly into the rendering tanks or vats, and no garbage, dead animals, or other vegetable or animal substances shall be emptied or spilled from the tightly-closed packages, barrels or boxes outside of the apartments containing the rendering tanks or vats. And the said apartments shall have suction conduits, constructed as described in the first rule above. Every aforesaid package, barrel or box used in the collecting and conveying of garbage, carcasses or other vegetable or animal substances, shall be cleansed and disinfected thoroughly and completely forthwith, directly they have been emptied, and before using for any and each succeeding collection and conveyance of the aforesaid substances.

Fourth. That each of the aforesaid establishments, or any other, engaged in rendering or cremating dead animals, carcasses, fish or garbage, or other animal or vegetable matter, shall put into their rendering tanks, or vats, and begin the process of rendering as soon as possible after the receipt of the same, all dead animals, carcasses, fish or garbage, or other animal and vegetable matter whatsoever received by them respectively; and none of the aforesaid establishments, or any other, engaged in the aforesaid business shall keep, retain, or permit to be kept or retained, in or upon any street, yard, building or other place under their control, any dead animal, carcass, fish or garbage, or other animal or vegetable substances or matter whatsoever, for a period of more than two hours, between the hours of 6 o'clock a. m., and 6 o'clock p. m., without placing the same in rendering tanks or vats, and beginning the process of rendering or cremating the same, and when the process of rendering or cremating is once begun it shall be prosecuted with the utmost expedition in order to prevent putrefaction and fermentation, and all places where said business, or any branch of it, may be carried on shall be kept and maintained in a clean and wholesome condition. And all animal and vegetable matter coming from said heremetically sealed rendering tanks, or vats, shall be immediately put in the dryers and the process of

mediately begun and prosecuted to completion, with-
:ion.

:h of the aforesaid esablishments, or any other, en-
aforesaid business *shall confine* all gases, effluvia and
ated in any drying vat, pan or tank, and conduct the
ans of tight pipes, into the furnaces of said establish-
ctively, and there cause the same to be so burned that
: freed from all objectionable smells. And no person,
oration, engaged in such business, shall permit any
ia or fumes, engendered in the process of drying its
scape into the air except through such furnaces, after
l as above directed.

:h of the aforesaid establishments, or any other, en-
: aforesaid business, shall not, hereafter, render, cre-
n any dead animal, carcass, fish or garbage, refuse,
', or other animal or vegetable matter or substance
in any *open* tank, vat, furnace, kiln or vessel whatso-
means of any open fire or other open air process. But
f the burning of any such article, matter or substance
specified, the same shall be done in air-tight vessels,
:s, gases and effluvia engendered thereby shall be con-
he furnaces of said rendering or cremating establish-
ctively, and there burned so that the same shall be
ll objectionable smells.

Neither of the aforesaid establishments, nor any other
ration, shall deposit upon any lands within the afore-
d county, any garbage, offal, or other sour or putrid
animal matter whatsoever.

ny and every violation of any or either of the above
egulations, shall be forthwith reported to the State
ealth by the State inspector appointed by the said
e aforesaid town and county.

y person or corporation who shall violate, or fail to
any or either of the above orders or regulations, shall
a penalty of one hundred dollars ($100) for each and
, which penalty is hereby fixed for the violation of or

failure to comply with any or either of said orders and regulations.

Town of Castleton, Richmond County.

PETITION OF JOHN M. CARRERE, JR.

To His Excellency Hon. ROSWELL P. FLOWER, *Governor of the State of New York:*

STATE OF NEW YORK, } *ss.:*
CITY AND COUNTY OF NEW YORK. }

John M. Carrere, Jr., being duly sworn for his petition against the board of health of the town of Castleton, Richmond county, New York, does set forth and depose and say as follows:

First. That your petitioner is a resident of the village of New Brighton, in the town of Castleton, county of Richmond, State of New York.

Second. That your petitioner and his family reside upon certain premises owned by petitioner's wife in the village, town, county and State aforesaid, situate on the terrace or road known as Lower Terrace, between Church street and St. Nicholas place, in said town.

Third. That opposite and in front of the premises of your petitioner and for a distance of several hundred feet on either side of the said premises, there exists a certain pool of water which is formed on the one side by the steep embankment of the terrace aforesaid and on the other side by the embankment of the Rapid Transit Railroad Company's tracks, which latter embankment divides said pool from the waters of the Kill von Kull, or New York bay.

Fourth. That heretofore and for a number of years prior to this date the water ebbed and flowed in said pool by means of a large drain pipe laid under the embankment of said railroad company, which drain pipe was situated oppo * * *
* * * * * * * menced filling in the land covered by said pool of water opposite the premises occupied by him on said Upper Terrace, which premises so being filled

in, petitioner is informed and believes were and still are the property of said Edward Harding.

Sixth. That by reason of said filling in the drain pipe above mentioned, through which water ebbed and flowed in the above-named pool, was closed up either in part or altogether, so that said pool of water was by such filling in substantially divided into two pools of water, into which the waters of the bay no longer ebbed and flowed; but remained in a stagnant condition and became thereby a menace and danger to the health of the neighborhood.

That the water in the most northerly of said two pools has practically dried out; but that the water in the most southerly of said two pools did not dry out, for the reason that your petitioner is informed and believes the street wash empties itself therein, and your petitioner is further informed and believes that there is a certain amount of seepage through the banks of the railroad, which may also be a cause of said pool not having dried out.

Seventh. That the water in said pool above described is stagnant and covered with thick scum, and your petitioner is informed and believes is a menace to the health of your petitioner and his family and of those living in the vicinity of said nuisance.

Eighth. That the most northerly of said pools above described, though substantially dry, is rendered unhealthful, injurious, obnoxious and a menace to the health of your petitioner and of his family and of those living in the vicinity of said pool by reason of the sewer pipe connecting with the house on said Upper Terrace opposite the same or a part thereof, and this pipe should, and your petitioner believes is intended, to connect with the waters of the bay; but which drainage and sewer pipe is broken at a point in said pool, so that all sewerage empties itself into said pool and is not carried away therefrom, and is unsightly, obnoxious, and, your petitioner believes, injurious to his health and to the health of his family and of the neighborhood.

Ninth. That your petitioner is informed and believes, as to the most southerly of said pools above mentioned, that the same can

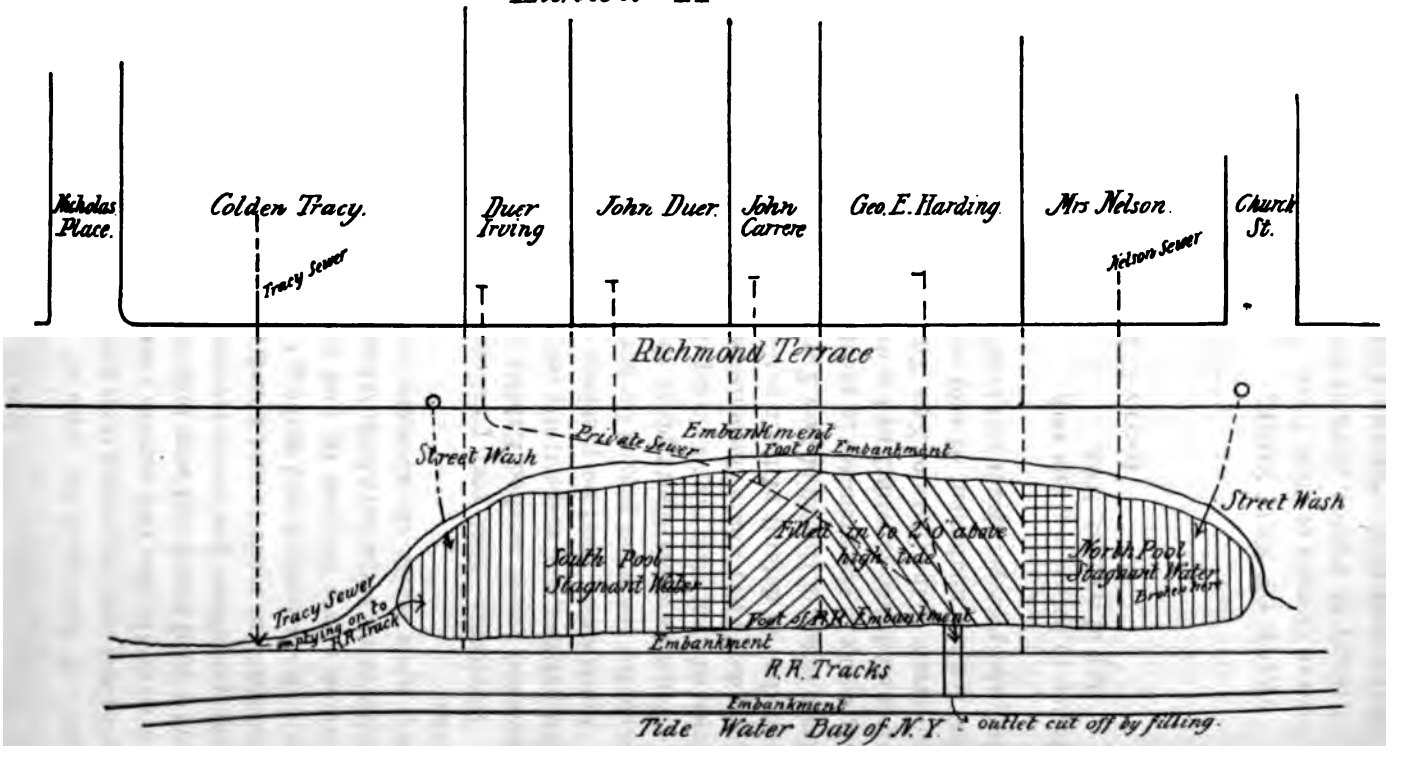
not be kept dry and healthful except by filling in above the high-water mark and by causing the street wash at said point to be carried into the bay and not empty itself upon said property.

Tenth. That your petitioner is informed and believes that the drainage of the house opposite and beyond the southerly edge thereof, being premises on the northwesterly corner of St. Nicholas place and the terrace, empties itself under the track or property of the Rapid Transit Railroad Company at a point immediately beyond the southerly edge of said pool and from said point courses into said pool, rendering the same a menace to the health of your petitioner and his family and the neighborhood.

Eleventh. That on or about the 15th day of April, 1894, petitioner received a notice from the health board of the above-named town, by which he was ordered to extend the sewer of his house to the waters of the bay. That your petitioner thereupon requested of said board that a sewer be put through the terrace of a sufficient length to connect with the sewers already in said terrace and extending opposite and beyond the premises of your petitioner. That said application was refused because neighbors of your petitioner were said to have sewers connecting with the waters of the bay, and that, therefore, the expenditure would be an unjust one as to them. That your petitioner thereupon immediately caused the sewer connected with his house to be extended to the waters of the bay at a great expense, and further caused land owned by him and covered by the pool herein mentioned to be filled in, in order that the same might be dry and healthful, which filling in was made necessary by the causes above recited. That thereupon your petitioner discovered that the sewers which were supposed to connect with the waters of the bay and a street drain near deponent's premises were in the condition above recited, and that said condition and the condition of the pool were and still are a menace to the health of the neighborhood, and are so sufficiently to injure the value of the property as well.

Twelfth. That your petitioner immediately, upon being advised of and ascertaining the conditions above referred to, wrote to the

Exhibit "A"


Nicholas Place.
Colden Tracy.
Tracy Sewer
Duer Irving
John Duer.
John Carrere
Geo. E. Harding.
Mrs Nelson.
Nelson Sewer
Church St.
Richmond Terrace
Street Wash
Private Sewer
Embankment
Foot of Embankment
Street Wash
Fillet in to 2'0" above high tide
South Pool Stagnant Water
North Pool Stagnant Water
Tracy Sewer emptying on to R.R. Track
Foot of R.R. Embankment
Embankment
R.R. Tracks
Embankment
Tide Water Bay of N.Y.
outlet cut off by filling

oard of health of the town of Castleton complaining of such ondition and requesting their attention to the same. That in the ourse of the last two months your petitioner has repeatedly written to said board and seen individual members thereof, and that our petitioner has never received a reply to any written communications made to said board, and that no attention has been paid to his demand, and nothing has been done to change the conditions above referred to, and your petitioner is informed and believes no steps have been taken to compel the owners of property upon which the above-recited nuisances exist to abate the same.

Thirteenth. That your petitioner has caused a diagram to be annexed hereto marked Exhibit A, and which is made a part of this petition, and respectfully referred to.

Fourteenth. That no previous or other appplication has been made for the relief prayed for herein.

Wherefore, petitioner prays that said board of health of the town of Castleton may be compelled to take all steps necessary to immediately abate the nuisances referred to in this petition, and that in default of their action being taken immedately, the State Board of Health of New York take all steps and do all things necessary in the premises in accordance with the statute in such cases made and provided, and in default thereof that his honor the Governor of the State of New York take such steps in the premises for the abatement of said nuisances as are provided by the law; and your petitioner will ever pray.

JOHN M. CARRERE, Jr.

Sworn to before me, this 16th day of August, 1894.

HENRY E. FRANKENBERG,
Notary Public, Kings County.

STATE OF NEW YORK, } ss.:
CITY AND COUNTY OF NEW YORK. }

I, Henry D. Purroy, clerk of the city and county of New York, and also clerk of the Supreme Court for the said city and county,

being a court of record, do hereby certify, that Henry C. Frankenberg has filed in the clerk's office of the county of New York, a certified copy of his appointment as notary public for the county of Kings with his autograph signature, and was, at the time of taking the annexed deposition, duly authorized to take the same. And that I am well acquainted with the handwriting of said notary public, and verily believe that the signature to the annexed certificate is genuine.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said court and county, the 16th day of August, 1894.

HENRY D. PURROY,
Clerk.

Requesting Immediate Attention to Complaint of John M, Carrere, Jr., in Relation to Nuisance in Town of Castleton, Richmond County.

OFFICE OF CARRERE & LEAKIN,
NEW YORK, *August* 18, 1894.

F. O. DONOHUE, M. D., *President of the State Board of Health, Albany, N. Y.:*

Dear sir.— We are in receipt this morning of a communication from Col. T. S. Williams, private secretary of the Governor, acknowledging the receipt of our petition on behalf of our client, John M. Carrere, Jr., in relation to a certain nuisance in the town of Castleton, Richmond county, N. Y., and in which he informs us that said petition has been referred to the State Board of Health by the Governor.

The petition sets forth clearly the grounds of complaint, and we beg to request immediate attention to the matter. Patience has long since ceased to be a virtue with reference to application and entreaty to the local board of health, and unless your board can immediately remedy the wrong we will be compelled to litigation.

Very truly,

CARRERE & LEAKIN.

ALBANY, *August* 21, 1894.

To Messrs. CARRERE & LEAKIN, *Counselors at Law*, 80 *Broadway, New York City, N. Y.:*

Gentlemen.— We are in receipt of your letter of the 18th instant, also of petition from the Governor.

In reply, I would state that the matter has been referred to the drainage committee of this board, of which State Engineer Adams is chairman. Mr. Adams or a representative will visit Castleton and investigate the nuisance complained of, the latter part of this week, possibly Friday, and report upon the same to this Department.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

STATE OF NEW YORK:

EXECUTIVE CHAMBER,
ALBANY, *February* 26, 1895.

To the Commissioners of the State Board of Health :

Gentlemen.— The Governor directs me to refer to your honorable body the accompanying amended petition of John M. Carrere, Jr., against the board of health of the town of Castleton, Richmond county, N. Y., for such attention as the subject may merit.

Very respectfully yours,

ASHLEY W. COLE,
Private Secretary.

NEW YORK, *February* 23, 1895.
OFFICE OF L. SIDNEY CARRERE,

To Hon. ASHLEY W. COLE, *Secretary to the Governor of the State of New York, Albany, N. Y.:*

Dear sir.— I inclose this day, to Hon. Levi P. Morton, Governor of the State of New York, an amended petition in the matter of

the complaint of John M. Carrere, Jr., against the board of health of the town of Castleton, in Richmond county, N. Y.

The original complaint was dated August 16, 1894, and filed August 17, 1894, with Hon. Roswell P. Flower, and by him referred on the same day to the State Board of Health.

The State Board of Health referred the complaint to Mr. John Bogart, Consulting Engineer, in New York city, and Mr. Bogart has made several investigations of the nuisances complained of. It was not until lately discovered by me, that the original petition, through some clerical error in my office, omitted what should be a part of second page; and it is my endeavor to make the petition complete, before any definite action is taken upon it which could effect the local board of health, or any other local or State officers. I have no doubt his honor, the Governor, will see fit to refer this, as the previous petition was referred, to the State Board of Health, and I write this in explanation, and also to beg that the matter may be expedited as much as possible.

Yours respectfully,

L. SIDNEY CARRERE.

OFFICE OF L. SIDNEY CARRERE,
NEW YORK, *February* 23, 1895.

To Hon. LEVI P. MORTON, *Governor of the State of New York, Albany, N. Y.:*

Sir.— Inclosed please find an amended petition in the matter of a complaint of John M. Carrere, Jr., against the board of health of the town of Castleton, Richmond county, N. Y.

The original complaint of this matter was made to the Hon. Roswell P. Flower, and by him referred to the State Board of Health, who now hold the same.

Begging that this may receive your early attention, I am,

Yours respectfully,

L. SIDNEY CARRERE.

Amended Petition of John M. Carrere, Jr., to His Excellency Hon. Levi P. Morton, Governor of the State of New York. Petition, Supplemental to Petition Made to Hon. Roswell P. Flower, Governor of the State of New York. Filed August 17, 1894.

To His Excellency Hon. LEVI P. MORTON, *Governor of the State of New York:*

CITY AND COUNTY OF NEW YORK, *ss.:*

John M. Carrere, Jr., for his amended petition against the Board of Health of the town of Castleton, Richmond county, New York, does set forth and say as follows:

That your petitioner did make a petition addressed to His Excellency, Hon. Roswell P. Flower, Governor of the State of New York, against the Board of Health of the town of Castleton, Richmond county, New York; which petition was duly verified on the 16th day of August, 1894, and filed in the office of the Governor of the State of New York, on the 17th day of August, 1894, and thereupon referred to the State Board of Health by the Governor, upon said 17th day of August, 1894. A copy of which petition is hereto annexed and marked Exhibit B.

That by a clerical error, certain matter intended to be included, described and recited in said petition, was omitted therefrom, as follows, to wit: "Opposite lands now owned by Edward Harding, Esq.

"Fifth.— That some time since, to wit, on or about the month of March, 1894, said Edward Harding commenced."

Your petitioner, therefore, in and for his amended petition, does set forth and say, as follows:

First.— That your petitioner is a resident of the village of New Brighton in the town of Castleton, county of Richmond, State of New York.

Second.— That your petitioner and his family reside upon certain premises owned by petitioner's wife in the village, town, county, and State aforesaid, situate on the Terrace or road known as Lower Terrace between Church street, and St. Nicholas place, in said town.

Third.— That opposite and in front of the premises of your petitioner and for a distance of several hundred feet on either side of the said premises there exists a certain pool of water which is formed on the one side by the steep embankment of the terrace aforesaid, and on the other side by the embankment of the Rapid Transit Railroad Company's tracks which latter embankment divides said pool from the waters of the Kill von Kull or New York bay.

Fourth.— That heretofore and for a number of years prior to this date the water ebbed and flowed in said pool by means of a large drain pipe laid under the embankment of said railroad company, which drain pipe was situated opposite lands now owned by Edward Harding, Esq.

Fifth.— That some time since, to wit, on or about the month of March, 1894, said Edward Harding commenced filling in the land covered by said pool of water opposite the premises occupied by him on said Upper Terrace which premises so being filled in petitioner is informed and believes were and still are the property of said Edward Harding.

Sixth.— That by reason of such filling in the drain pipe above mentioned through which water ebbed and flowed in the above-named pool, was closed up either in part or altogether, so that said pool of water was by such filling in substantially divided into two pools of water, into which the waters of the bay no longer ebbed and flowed; but remained in a stagnant condition and became thereby a menace and danger to the health of the neighborhood.

That the water in the most northerly of said two pools has practically dried out; but that the water in the most southerly of said two pools did not dry out, for the reason that your petitioner is informed and believes the street wash empties itself therein, and your petitioner is further informed and believes that there is a certain amount of seepage through the banks of the railroad, which may also be a cause of said pool not having dried out.

Seventh.— That the water in said pool above described is stagnant and covered with thick scum, and your petitioner is informed

and believes is a menace to the health of your petitioner and his family, and of those living in the vicinity of said nuisance.

Eighth.— That the most northerly of said pools above described, though substantially dry, is rendered unhealthful, injurious, obnoxious, and a menace to the health of your petitioner and of his family and of those living in the vicinity of said pool, by reason of the sewer pipe, connecting with the house on said Upper Terrace opposite the same, or a part thereof, and this pipe should and your petitioner believes is intended to connect with the waters of the bay; but which drainage and sewer pipe is broken at a point in said pool, so that all sewerage empties itself into said pool, and is not carried away therefrom, and is unsightly, obnoxious, and your petitioner believes injurious to his health and to the health of his family, and of the neighborhood.

Ninth.— That your petitioner is informed and believes as to the most southerly of said pools above mentioned, that the same can not be kept dry, and unhealthful except by filling in above the high-water mark and by causing the street wash at said point to be carried into the bay, and not empty itself upon said property.

Tenth.— That your petitioner is informed and believes that the drainage of houses opposite and beyond the southerly edge thereof, being premises on the northwesterly corner of St. Nicholas place and the Terrace, empties itself under the track or property of the Rapid Transit Railroad Company at a point immediately beyond the southerly edge of said pool, and from said point courses into said pool, rendering the same a menace to the health of your petitioner and his family and the neighborhood.

Eleventh.— That on or about the 15th day of April, 1894, petitioner received a notice from the Health Board of the above named town, by which he was ordered to extend the sewer of his house to the waters of the bay. That your petitioner thereupon requested of said board that a sewer be put through the Terrace of sufficient length to connect with the sewer already in said Terrace, and extending opposite and beyond the premises of your petitioner. That said application was refused, because neighbors of your petitioner were said to have sewers connecting with the

waters of the bay, and that therefore the expenditure would be an unjust one as to them. That your petitioner thereupon immediately caused the sewer connected with his house to be extended to the waters of the bay, at a great expense and further caused land owned by him and covered by the pool herein mentioned to be filled in, in order that the same might be dry and healthful, which filling in was made necessary by the causes above recited. That thereupon your petitioner discovered that the sewers which were supposed to connect with the waters of the bay, and a street drain near deponent's premises were in the condition above recited, and that said condition and the condition of the pool were and still are a menace to the health of the neighborhood, and are so sufficiently to injure the value of the property as well.

Twelfth.— That your petitioner immediately upon being advised of and ascertaining the conditions above referred to, wrote to the Board of Health, of the town of Castleton, complaining of such condition, and requesting their attention to the same. That in the course of the last two months, your petitioner has repeatedly written to said board, and seen individual members thereof, and that your petitioner has never received a reply to any written communications made to said board, and that no attention has been paid to his demand, and nothing has been done to change the conditions above referred to, and your petitioner is informed and believes no steps have been taken to compel the owners of property upon which the above-recited nuisances exist to abate the same.

Thirteenth. That your petitioner has caused a diagram to be annexed hereto, marked Exhibit A, and which is made a part of this petition, and respectfully referred to.

Fourteenth. That no previous or other application has been made for the relief prayed for herein, except as hereuntobefore set forth in the original petition herein.

Wherefore, petitioner prays that the said board of health of the town of Castleton, may be compelled to take all steps necessary to immediately abate the nuisances referred to in the original petition, herewith referred to, in this amended petition, and that said original petition, dated August 16, 1894, and filed August

17, 1894, and this amended petition, may be taken together and considered as one petition and complaint, and that in default of the action of the said board of health of the town of Castleton, being taken immediately, the State Board of Health of New York take all steps, and do all things necessary in the premises in accordance with the statute in such cases made and provided, and in default therefore, that his honor, the Governor of the State of New York take such steps in the premises for the abatement of said nuisances as are provided by the law; and your petitioner will ever pray.

JOHN M. CARRERE, Jr.

NEW YORK CITY, *February* 21, 1895.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK. } *ss.:*

John M. Carrere, Jr., being duly sworn, deposes and says, that he has read the foregoing petition and knows the contents thereof, and that same is true of his own knowledge except as to the matters therein stated to be alleged upon information and belief, and that as to those matters, he believes it to be true.

JOHN M. CARRERE, Jr.

Sworn to before me, this 21st day of February, 1895.

FRANK P. HOFFMAN,
Notary Public, New York County.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK. } *ss.:*

I, Henry D. Purroy, clerk of the city and county of New York, and also clerk of the Supreme Court for the said city and county the same being a court of record, do hereby certify, that Frank P. Hoffman, before whom the annexed deposition was taken, was, at the time of taking the same, a notary public of New York, dwelling in said city and county, duly appointed and sworn, and

authorized to administer oaths to be used in any court in said State, and for general purposes; that I am well acquainted with the handwriting of said notary, and that his signature thereto is genuine, as I verily believe.

In testimony whereof, I have hereunto set my hand and affixed the seal of the said court and county, the 25th day of February, 1895.

[L. S.] HENRY D. PURROY,
Clerk.

EXHIBIT B.

To His Excellency Hon. ROSWELL P. FLOWER, *Governor of the State of New York:*

STATE OF NEW YORK, } *ss.:*
CITY AND COUNTY OF NEW YORK. }

John M. Carrere, Jr., being duly sworn, for his petition against the board of health of the town of Castleton, Richmond county, N. Y., does set forth and depose and say as follows:

First. That your petitioner is a resident of the village of New Brighton, in the town of Castleton, county of Richmond, State of New York.

Second. That your petitioner and his family reside upon certain premises owned by petitioner's wife in the village, town, county and State aforesaid, situate on the terrace or road known as Lower Terrace, between Church street and St. Nicholas place, in said town.

Third. That opposite and in front of the premises of your petitioner and for a distance of several hundred feet on either side of the said premises, there exists a certain pool of water which is formed on the one side by the steep embankment of the terrace aforesaid, and on the other side by the embankment of the Rapid Transit Railroad Company's tracks, which latter embankment divides said pool from the waters of the Kill von Kull, or New York bay.

Fourth. That heretofore and for a number of years prior to this date the water ebbed and flowed in said pool by means of a

ge drain pipe laid under the embankment of said railroad com-
ıy, which drain pipe was situated oppo menced filling in the
d covered by said pool of water opposite the premises occupied
him on said Upper Terrace, which premises so being filled in,
itioner is informed and believes were and still are the property
ıaid Edward Harding.

ixth. That by reason of such filling in the drain pipe above
ıtioned, through which water ebbed and flowed in the above-
ıed pool, was closed up, either in part or altogether, so that
l pool of water was by such filling in substantially divided
› two pools of water into which the waters of the bay no longer
›ed and flowed; but remained in a stagnant condition and be-
ıe thereby a menace and danger to the health of the neighbor-
d.

That the water in the most northerly of said two pools has
otically dried out; but that the water in the most southerly of
l two pools did not dry out, for the reason that, your petitioner
ıformed and believes, the street wash empties itself therein, and
ır petitioner is further informed and believes that there is a cer-
ı amount of seepage through the banks of the railroad, which
y also be a cause of said pool not having dried out.

Seventh. That the water in said pool above described is stag-
ıt and covered with thick scum, and your petitioner is informed
l believes is a menace to the health of your petitioner and his
ıily and of those living in the vicinity of said nuisance.

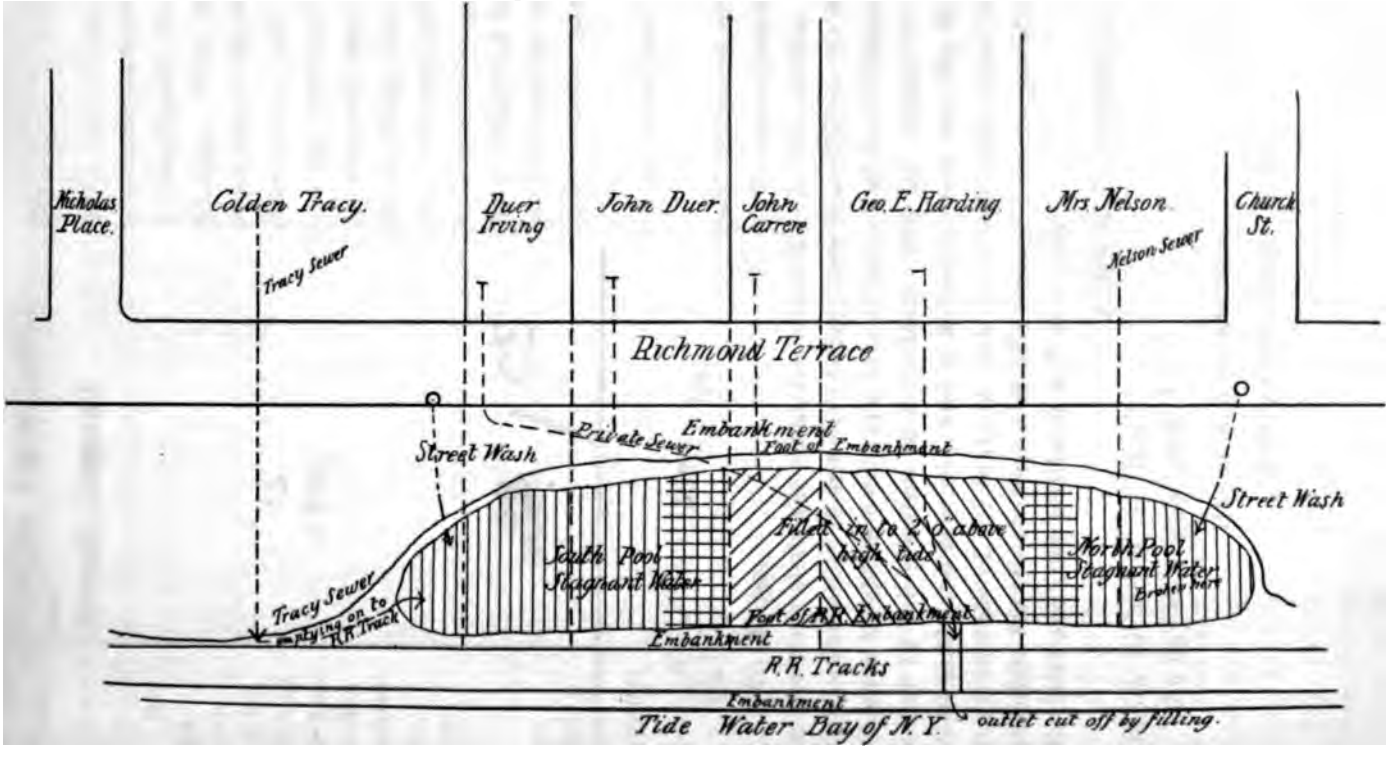
Eighth. That the most northerly of said pools above described,
ugh substantially dry, is rendered unhealthful, injurious, ob-
:ious and a menace to the health of your petitioner and of his
ıily and of those living in the vicinity of said pool, by reason
the sewer pipe connecting with the house on said Upper Ter-
e opposite the same or a part thereof, and this pipe should and
ır petitioner believes is intended to connect with the waters of
: bay; but which drainage and sewer pipe is broken at a point
said pool, so that all sewerage empties itself into said pool, and
not carried away therefrom, and is unsightly, obnoxious and
›ur petitioner believes, injurious to his health and to the health
his family and of the neighborhood.

Ninth.— That your petitioner is informed and believes as to the most southerly of said pools above mentioned that the same can not be kept dry and healthful except by filling in above the high-water mark and by causing the street wash at said point to be carried into the bay and not empty itself upon said property.

Tenth.— That your petitioner is informed and believes that the drainage of the house opposite and beyond the southerly edge thereof, being premises on the northwesterly corner of St. Nicholas place and the Terrace, empties itself under the track or property of the Rapid Transit Railroad Company, at a point immediately beyond the southerly edge of said pool and from said point coures into said pool rendering the same a menace to the health of your petitioner and his family and the neighborhood.

Eleventh.— That on or about the 15th day of April, 1894, petitioner received a notice from the Health Board of the above-named town, by which he was ordered to extend the sewer of his house to the waters of the bay. That your petitioner thereupon requested of the said board that a sewer be put through the Terrace of a sufficient length to connect with the sewers already in said Terrace and extending opposite and beyond the premises of your petitioner. That said application was refused because neighbors of your petitioner were said to have sewers connecting with the waters of the bay, and that therefore the expenditure would be an unjust one as to them. That your petitioner thereupon immediately caused the sewer connected with his house to be extended to the waters of the bay at a great expense and further caused land owned by him and covered by the pool herein mentioned to be filled in, in order that the same might be dry and healthful, which filling in was made necessary by the causes above recited. That thereupon your petitioner discovered that the sewers which were supposed to connect with the waters of the bay and a street drain near deponent's premises were in the condition above recited, and that said condition and the condition of the pool were and still are a menace to the health of the neighborhood and are so sufficiently to injure the value of the property as well.

Exhibit "A"


Nicholas Place.
Colden Tracy.
Tracy Sewer
Duer Irving
John Duer.
John Carrere
Geo. E. Harding.
Mrs. Nelson.
Nelson Sewer
Church St.
Richmond Terrace
Street Wash
Private Sewer
Embankment
Foot of Embankment
Street Wash
Fillet in to 2'0" above high tide
South Pool Stagnant Water
North Pool Stagnant Water
Tracy Sewer emptying on to R.R. Track
Foot of R.R. Embankment
Embankment
R.R. Tracks
Embankment
Tide Water Bay of N.Y.
outlet cut off by filling.

Twelfth.— That your petitioner immediately upon being advised of and ascertaining the condition above referred to wrote to the Board of Health of the town of Castleton complaining of such condition and requesting their attention to the same. That in the course of the last two months your petitioner has repeatedly written to said board and seen individual members thereof, and that your petitioner has never received a reply to any written communications made to said board, and that no attention has been paid to his demand, and nothing has been done to change the conditions above referred to, and your petitioner is informed and believes no steps have been taken to compel the owners of property upon which the above-recited nuisances exist to abate the same.

Thirteenth.— That your petitioner has caused a diagram to be annexed thereto marked Exhibit A, and which is made a part of this petition, and respectfully referred to.

Fourteenth.— That no previous or other application has been made for the relief prayed for herein.

Wherefore petitioner prays that said Board of Health of the town of Castleton may be compelled to take all steps necessary to immediately abate the nuisances referred to in this petition, and that in default of their action being taken immediately the State Board of Health of New York, take all steps and do all things necessary in the premises in accordance with the statute in such cases made and provided, and in default thereof that His Honor the Governor of the State of New York take such steps in the premises for the abatement of said nuisances as are provided by the law; and your petitioner will ever pray.

JOHN M. CARRERE, Jr.

Sworn to before me, this
16th day of August, 1894.

HENRY E. FRANKENBERG,
Notary Public, Kings County.

Report in Relation to Certain Alleged Nuisances in the Town of Castleton, Richmond County, Staten Island, N. Y.

NEW YORK, *March* 28, 1895.

Hon. C. W. ADAMS, *State Engineer, Chairman Committee State Board of Health:*

Sir.— I present the following report, in regard to certain alleged nuisances in the town of Castleton, Richmond county. These nuisances are the subject of a petition to the Governor of the State, made by John M. Carrere, Jr. This petition was by the Governor referred to the State Board of Health, and by that board referred to your committee.

Respectfully,

JOHN BOGART,
Consulting Engineer.

REPORT.

The petition of John M. Carrere, Jr., was dated August 16, 1894, received at the executive chamber August 17, and on the same date transmitted to the State Board of Health. It is addressed to the Governor, and is in form of a complaint against the board of health of the town of Castleton, Richmond county.

The statements in this petition are, briefly, as follows:

That the petitioner is a resident of the village of New Brighton, in said town and county.

That he resides with his family upon premises owned by his wife in that village, on the road known as Lower Terrace, between Church street and St. Nicholas place.

That opposite and in front of these premises and for a distance of several hundred feet on either side there exists a pool of water formed on one side by the steep embankment of the terrace, and on the other side by the embankment of the Rapid Transit Railroad Company's track, which latter embankment divides said pool from the waters of the Kill von Kull, or New York bay.

That heretofore and for a number of years the water ebbed and flowed in said pool by means of a large drain pipe laid under the *railroad embankment.*

That by filling which has been made in the pool in front of adjacent property, the entrance of water from the pool to this drain pipe has been closed, and by thus filling the original pool is now divided into two pools, in which the waters of the bay no longer ebb and flow, but the pools remain in a stagnant condition, and are a menace and danger to the health of the neighborhood.

That street wash empties into the southerly one of these pools and house drainage into both of them, and that the water in the pools is stagnant and unhealthful and that the pools can not be kept dry and healthful, except by filling in above high-water mark, and by causing the street wash to be carried into the bay.

That the petitioner was ordered by the town board of health on or about April 15, 1894, to extend the sewer of his house to the waters of the bay; that he thereupon requested of the board of health, that a sewer be put through the terrace (the street in front of his house) to connect with other sewers and to extend opposite and beyond his premises; that this was refused, because it was said that neighbors had sewers connecting with the waters of the bay; that thereupon he did so extend his sewer at great expense, and also filled in the pool opposite his premises, and then discovered the conditions above recited; that he wrote to the town board of health, complaining of such conditions and requesting their attention; that he has repeatedly written to said board, has received no reply, and nothing has been done to change these conditions, and he believes no steps have been taken to compel owners of the property on which these nuisances exist, to abate the same.

He therefore asks that the town board of health be compelled to take action necessary to immediately abate these nuisances, and in default of such action that the State Board of Health take action in accordance with the statute, and in default thereof that his honor the Governor take such steps for the abatement of said nuisances as are provided by law.

I was requested to examine into the matter by letter from the State Engineer, dated September 4, 1894. After correspondence with the parties, I made a personal examination of the premises on September 11th and 12th, and met the complainant and a num-

ber of other residents in the vicinity and also the health officer and members of the board of health of the village of New Brighton and Mr. G. Rappenecker, trustee of the village.

I found the following conditions:

The Staten Island Rapid Transit Railway is built in front of this portion of the shore of Staten Island upon an embankment cutting across the line of a cove which existed in the natural concave shore-line at this place. The street or terrace on which are the premises of the complainant, and of several neighbors, is at a considerable elevation (about 15 feet) above the water, and there is a sloping bank from the street to the water of the bay, which, before the construction of the railway, came directly to the foot of this sloping bank. The construction of the railway has inclosed a space between the foot of this bank and the railway embankment about 900 feet long and 75 feet wide at the centre. The railway embankment, though faced with heavy rip-rap stone, seems sufficiently solid to prevent much passage of water through it. There are one or more street drain pipes entering into this pool, and some house sewage had recently been flowing into it. This latter, however, I was informed had been corrected. The condition of the water in this pool and of the soil at its sides and bottom was filthy and a menace to health. It was clearly evident that no street washings nor drainage, nor sewage should be permitted to be delivered into this pool; that all sewers or pipes or culverts from streets should be extended to the water outside the railway embankment, and also that the pool should be filled above the water level.

I found that the local board of health had appreciated the necessity of such action. In 1892 the board of health requested the trustees of the village of New Brighton to build a sewer on the terrace along this property. The sewer was never built. I am informed that when the railroad was constructed, the property owners had the right of an outlet for their sewers across the railroad embankment, but this was availed of only in one case; other sewage discharged directly into the pool, into which, however, the tide ebbed and flowed through a 24-inch pipe through the

railway embankment opposite the premises of Mr. Geo. Edward Harding. The flow through this pipe had, however, been stopped by the filling of the pool in front of Mr. Harding's property, and several house sewers had been connected with this pipe. This had been done in compliance with orders of the board of health, served upon each of the property owners, to extend the waste pipes of their houses beyond the railroad.

The board of health had also petitioned the board of trustees of the village to extend the street drain or culvert at the foot of Church street to and through the railroad embankment, and also to provide outlet for other culverts emptying into the pool.

The board of health had also considered the advisability of ordering the pool to be filled, but had not issued an order to that effect because they thought the trustees should first extend the street drains or culverts just mentioned.

During my visit on September 11, 1894, I met Mr. Rappenecker, a trustee of the village, and representing the ward in which this property is located. He told me that he appreciated the necessity of extending the drains or culvert beyond the pool and through the railway embankment, and that he would immediately present the matter to the board of trustees, and that he believed action would be at once taken. With this assurance the members of the board of health determined to order the pool to be filled, and any waste pipes discharging into the pool to be extended through the railroad embankment.

As such action on the part of the trustees and of the Board of Health would abate the nuisance, further proceedings on my part were temporarily postponed.

Directly afterwards on September 18, 1894, trustee Rappenecker, offered, and there was adopted by the Board of Trustees, a resolution directing the clerk of the board to request the cooperation of the Staten Island Rapid Transit Railroad Company in the construction of two storm water culverts under the railroad, in order that the place in question might be properly drained. On the same date the Board of Health directed that orders be served on the property owners to make the filling required within thirty

days, and these orders were directly served on these property owners, as was also an order on one of them to extend the waste pipe of his premises under the railroad to the water.

On October 27th, I again made an inspection of the locality and met Mr. Carrere, Trustee Rappenecker, Dr. Walser the Health Officer, and alsoo the president and secretary of the Board of Health. I found that the orders above referred to had been served by the Board of Health; that some property owners had requested an extension of time for compliance, in order that filling might be obtained; and also requesting that the connections of street drains or culverts should be made before the filling and suggesting that if such extensions were made there might be no necessity for any filling. The trustee stated that there was a question as to the respective liability of the village and the railroad to make the extensions of the street culverts, or to share the cost of such extensions. He also stated that negotiations were in progress with the proper officers of the railroad, that he still appreciated the necessity of these extensions, and that he would give attention to the matter immediately.

Considerable additional filling had been made in portions of the pool.

Seeing that if the extensions to tide water were made of all pipes entering this pool, and if then the pool should be properly filled, there would be no reason for additional action by the State Board of Health, and believing that the trustee intended to have these extensions made, further proceedings were again postponed, but with the express statement, that if these extensions of pipes should not be made before the approach of another warm season, I would recommend summary action by the State Board of Health.

I have now again visited the premises and find that the extensions of the culverts or drain pipes have not been made. Additional fillings had been done, but there still remain portions of the pool with standing water, and in my opinion unless the action indicated above is taken, conditions will result on the advent of hot weather, which will be a menace to health, which may properly be declared a nuisance, and in regard to which the State

Board of Health may suitably take the action provided by statute.

The first thing that must be done is the extension of the street drains or culverts through the railroad embankment. This must be done by the trustees of the village of New Brighton. If the railroad is liable for a portion of the expense of this work, the village can afterwards recover the proper amounts from the railroad under legal process. Action necessary to the public health should not await the settlement of such questions. The local Board of Health has repeatedly requested the trustees of the village to take this action, but without result.

After the drains and culverts are extended so that there is no flow of polluted water into the tract included between the railroad embankment and the original shore line, then the local Board of Health should have the owners of the adjacent property fill the space to a hight above high tide and properly grade the surface.

The provisions of law under whcih the State Board may act are in chapter 661, Laws of 1893, the General Health Law, article 1, section 6, is as follows:

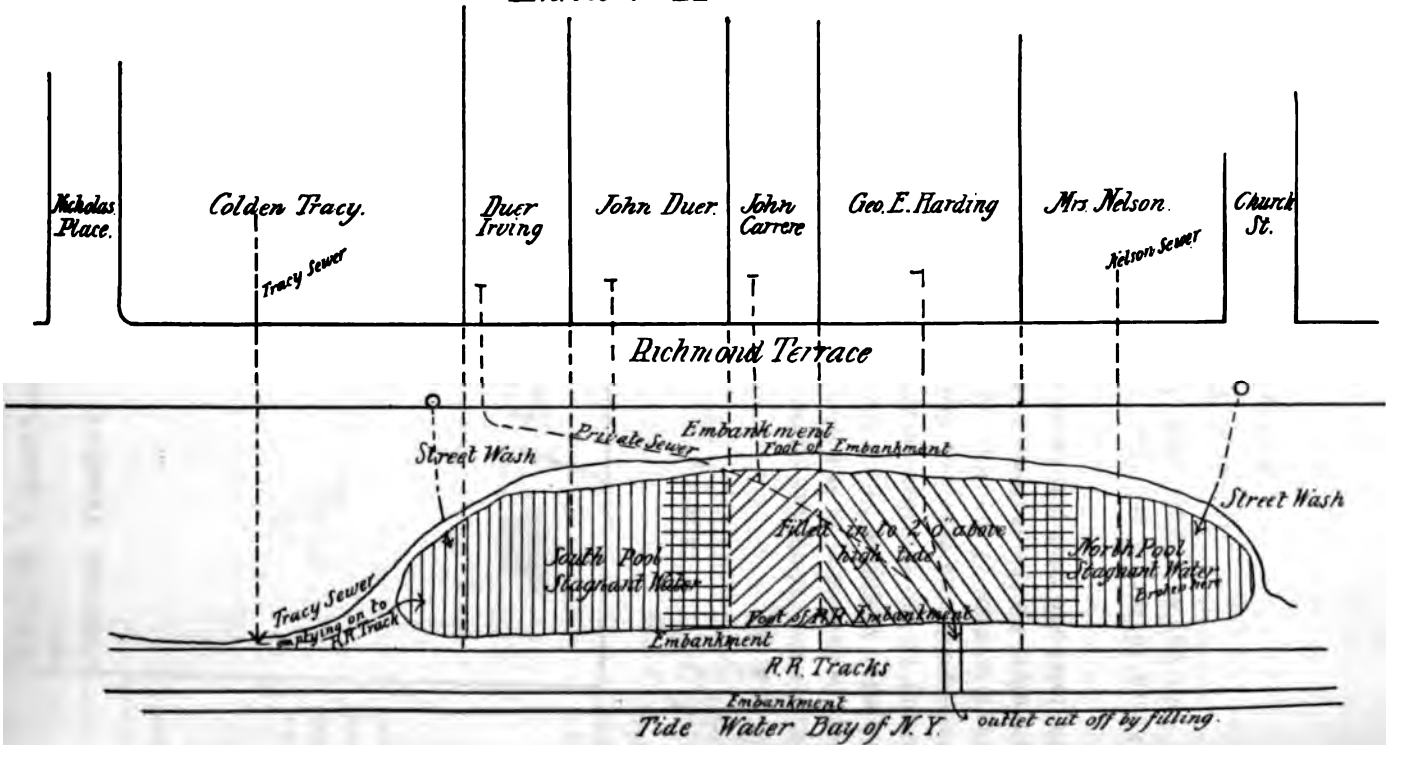
§ 6. Nuisances.—The state board of health shall have all necessary powers to make examinations into nuisances, or questions affecting the security of life and health in any locality. Whenever required by the governor of the state, it shall make such an examination and shall report the results thereof to the governor, within the time prescribed by him therefor. The report of every examination, when approved by the governor, shall be filed in the office of the secretary of state, and the governor may declare the matters public nuisances, which may be found and certified in any such report to be nuisances, and may order them to be changed, abated or removed as he may direct. Every such order shall be presumptive evidence of the existence of such nuisance; and the governor may, by a precept under his hand and official seal, require the district attorney, sheriff and other officers of the county where such nuisance is maintained, to take all necessary measures to execute such order and cause it to be obeyed and the acts of any such county officer in the abatement of any such nuisance, reason-

Ninth.— That your petitioner is informed and believes as to the most southerly of said pools above mentioned that the same can not be kept dry and healthful, except by filling in above the high-water mark and by causing the street wash at said point to be carried into the bay and not empty itself upon said property.

Tenth.— That your petitioner is informed and believes that the drainage of the house opposite and beyond the southerly edge thereof, being premises on the northwesterly corner of St. Nicholas place and the Terrace, empties itself under the track or property of the Rapid Transit Railroad Company, at a point immediately beyond the southerly edge of said pool and from said point coures into said pool rendering the same a menace to the health of your petitioner and his family and the neighborhood.

Eleventh.— That on or about the 15th day of April, 1894, petitioner received a notice from the Health Board of the above-named town, by which he was ordered to extend the sewer of his house to the waters of the bay. That your petitioner thereupon requested of the said board that a sewer be put through the Terrace of a sufficient length to connect with the sewers already in said Terrace and extending opposite and beyond the premises of your petitioner. That said application was refused because neighbors of your petitioner were said to have sewers connecting with the waters of the bay, and that therefore the expenditure would be an unjust one as to them. That your petitioner thereupon immediately caused the sewer connected with his house to be extended to the waters of the bay at a great expense and further caused land owned by him and covered by the pool herein mentioned to be filled in, in order that the same might be dry and healthful, which filling in was made necessary by the causes above recited. That thereupon your petitioner discovered that the sewers which were supposed to connect with the waters of the bay and a street drain near deponent's premises were in the condition above recited, and that said condition and the condition of the pool were and still are a menace to the health of the neighborhood and are so sufficiently to injure the value of the property as well.

Exhibit "A"


Nicholas Place.
Colden Tracy.
Tracy Sewer
Duer Irving
John Duer.
John Carrere
Geo. E. Harding
Mrs. Nelson.
Nelson Sewer
Church St.
Richmond Terrace
Street Wash
Private Sewer
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R.R. Tracks
Embankment
Tide Water Bay of N.Y.
outlet cut off by filling.

Twelfth.— That your petitioner immediately upon being advised of and ascertaining the condition above referred to wrote to the Board of Health of the town of Castleton complaining of such condition and requesting their attention to the same. That in the course of the last two months your petitioner has repeatedly written to said board and seen individual members thereof, and that your petitioner has never received a reply to any written communications made to said board, and that no attention has been paid to his demand, and nothing has been done to change the conditions above referred to, and your petitioner is informed and believes no steps have been taken to compel the owners of property upon which the above-recited nuisances exist to abate the same.

Thirteenth.— That your petitioner has caused a diagram to be annexed thereto marked Exhibit A, and which is made a part of this petition, and respectfully referred to.

Fourteenth.— That no previous or other application has been made for the relief prayed for herein.

Wherefore petitioner prays that said Board of Health of the town of Castleton may be compelled to take all steps necessary to immediately abate the nuisances referred to in this petition, and that in default of their action being taken immediately the State Board of Health of New York, take all steps and do all things necessary in the premises in accordance with the statute in such cases made and provided, and in default thereof that His Honor the Governor of the State of New York take such steps in the premises for the abatement of said nuisances as are provided by the law; and your petitioner will ever pray.

JOHN M. CARRERE, Jr.

Sworn to before me, this 16th day of August, 1894.

HENRY E. FRANKENBERG,

Notary Public, Kings County.

Report in Relation to Certain Alleged Nuisances in the Town of Castleton, Richmond County, Staten Island, N. Y.

NEW YORK, *March* 28, 1895.

Hon. C. W. ADAMS, *State Engineer, Chairman Committee State Board of Health:*

Sir.— I present the following report, in regard to certain alleged nuisances in the town of Castleton, Richmond county. These nuisances are the subject of a petition to the Governor of the State, made by John M. Carrere, Jr. This petition was by the Governor referred to the State Board of Health, and by that board referred to your committee.

Respectfully,

JOHN BOGART,
Consulting Engineer.

REPORT.

The petition of John M. Carrere, Jr., was dated August 16, 1894, received at the executive chamber August 17, and on the same date transmitted to the State Board of Health. It is addressed to the Governor, and is in form of a complaint against the board of health of the town of Castleton, Richmond county.

The statements in this petition are, briefly, as follows:

That the petitioner is a resident of the village of New Brighton, in said town and county.

That he resides with his family upon premises owned by his wife in that village, on the road known as Lower Terrace, between Church street and St. Nicholas place.

That opposite and in front of these premises and for a distance of several hundred feet on either side there exists a pool of water formed on one side by the steep embankment of the terrace, and on the other side by the embankment of the Rapid Transit Railroad Company's track, which latter embankment divides said pool from the waters of the Kill von Kull, or New York bay.

That heretofore and for a number of years the water ebbed and flowed in said pool by means of a large drain pipe laid under the *railroad embankment.*

That by filling which has been made in the pool in front of adjacent property, the entrance of water from the pool to this drain pipe has been closed, and by thus filling the original pool is now divided into two pools, in which the waters of the bay no longer ebb and flow, but the pools remain in a stagnant condition, and are a menace and danger to the health of the neighborhood.

That street wash empties into the southerly one of these pools and house drainage into both of them, and that the water in the pools is stagnant and unhealthful and that the pools can not be kept dry and healthful, except by filling in above high-water mark, and by causing the street wash to be carried into the bay.

That the petitioner was ordered by the town board of health on or about April 15, 1894, to extend the sewer of his house to the waters of the bay; that he thereupon requested of the board of health, that a sewer be put through the terrace (the street in front of his house) to connect with other sewers and to extend opposite and beyond his premises; that this was refused, because it was said that neighbors had sewers connecting with the waters of the bay; that thereupon he did so extend his sewer at great expense, and also filled in the pool opposite his premises, and then discovered the conditions above recited; that he wrote to the town board of health, complaining of such conditions and requesting their attention; that he has repeatedly written to said board, has received no reply, and nothing has been done to change these conditions, and he believes no steps have been taken to compel owners of the property on which these nuisances exist, to abate the same.

He therefore asks that the town board of health be compelled to take action necessary to immediately abate these nuisances, and in default of such action that the State Board of Health take action in accordance with the statute, and in default thereof that his honor the Governor take such steps for the abatement of said nuisances as are provided by law.

I was requested to examine into the matter by letter from the State Engineer, dated September 4, 1894. After correspondence with the parties, I made a personal examination of the premises on September 11th and 12th, and met the complainant and a num-

ber of other residents in the vicinity and also the health officer and members of the board of health of the village of New Brighton and Mr. G. Rappenecker, trustee of the village.

I found the following conditions:

The Staten Island Rapid Transit Railway is built in front of this portion of the shore of Staten Island upon an embankment cutting across the line of a cove which existed in the natural concave shore-line at this place. The street or terrace on which are the premises of the complainant, and of several neighbors, is at a considerable elevation (about 15 feet) above the water, and there is a sloping bank from the street to the water of the bay, which, before the construction of the railway, came directly to the foot of this sloping bank. The construction of the railway has inclosed a space between the foot of this bank and the railway embankment about 900 feet long and 75 feet wide at the centre. The railway embankment, though faced with heavy rip-rap stone, seems sufficiently solid to prevent much passage of water through it. There are one or more street drain pipes entering into this pool, and some house sewage had recently been flowing into it. This latter, however, I was informed had been corrected. The condition of the water in this pool and of the soil at its sides and bottom was filthy and a menace to health. It was clearly evident that no street washings nor drainage, nor sewage should be permitted to be delivered into this pool; that all sewers or pipes or culverts from streets should be extended to the water outside the railway embankment, and also that the pool should be filled above the water level.

I found that the local board of health had appreciated the necessity of such action. In 1892 the board of health requested the trustees of the village of New Brighton to build a sewer on the terrace along this property. The sewer was never built. I am informed that when the railroad was constructed, the property owners had the right of an outlet for their sewers across the railroad embankment, but this was availed of only in one case; other sewage discharged directly into the pool, into which, however, the tide ebbed and flowed through a 24-inch pipe through the

railway embankment opposite the premises of Mr. Geo. Edward Harding. The flow through this pipe had, however, been stopped by the filling of the pool in front of Mr. Harding's property, and several house sewers had been connected with this pipe. This had been done in compliance with orders of the board of health, served upon each of the property owners, to extend the waste pipes of their houses beyond the railroad.

The board of health had also petitioned the board of trustees of the village to extend the street drain or culvert at the foot of Church street to and through the railroad embankment, and also to provide outlet for other culverts emptying into the pool.

The board of health had also considered the advisability of ordering the pool to be filled, but had not issued an order to that effect because they thought the trustees should first extend the street drains or culverts just mentioned.

During my visit on September 11, 1894, I met Mr. Rappenecker, a trustee of the village, and representing the ward in which this property is located. He told me that he appreciated the necessity of extending the drains or culvert beyond the pool and through the railway embankment, and that he would immediately present the matter to the board of trustees, and that he believed action would be at once taken. With this assurance the members of the board of health determined to order the pool to be filled, and any waste pipes discharging into the pool to be extended through the railroad embankment.

As such action on the part of the trustees and of the Board of Health would abate the nuisance, further proceedings on my part were temporarily postponed.

Directly afterwards on September 18, 1894, trustee Rappenecker, offered, and there was adopted by the Board of Trustees, a resolution directing the clerk of the board to request the cooperation of the Staten Island Rapid Transit Railroad Company in the construction of two storm water culverts under the railroad, in order that the place in question might be properly drained. On the same date the Board of Health directed that orders be served on the property owners to make the filling required within thirty

days, and these orders were directly served on these property owners, as was also an order on one of them to extend the waste pipe of his premises under the railroad to the water.

On October 27th, I again made an inspection of the locality and met Mr. Carrere, Trustee Rappenecker, Dr. Walser the Health Officer, and alsoo the president and secretary of the Board of Health. I found that the orders above referred to had been served by the Board of Health; that some property owners had requested an extension of time for compliance, in order that filling might be obtained; and also requesting that the connections of street drains or culverts should be made before the filling and suggesting that if such extensions were made there might be no necessity for any filling. The trustee stated that there was a question as to the respective liability of the village and the railroad to make the extensions of the street culverts, or to share the cost of such extensions. He also stated that negotiations were in progress with the proper officers of the railroad, that he still appreciated the necessity of these extensions, and that he would give attention to the matter immediately.

Considerable additional filling had been made in portions of the pool.

Seeing that if the extensions to tide water were made of all pipes entering this pool, and if then the pool should be properly filled, there would be no reason for additional action by the State Board of Health, and believing that the trustee intended to have these extensions made, further proceedings were again postponed, but with the express statement, that if these extensions of pipes should not be made before the approach of another warm season, I would recommend summary action by the State Board of Health.

I have now again visited the premises and find that the extensions of the culverts or drain pipes have not been made. Additional fillings had been done, but there still remain portions of the pool with standing water, and in my opinion unless the action indicated above is taken, conditions will result on the advent of hot weather, which will be a menace to health, which may properly be declared a nuisance, and in regard to which the State

Board of Health may suitably take the action provided by statute.

The first thing that must be done is the extension of the street drains or culverts through the railroad embankment. This must be done by the trustees of the village of New Brighton. If the railroad is liable for a portion of the expense of this work, the village can afterwards recover the proper amounts from the railroad under legal process. Action necessary to the public health should not await the settlement of such questions. The local Board of Health has repeatedly requested the trustees of the village to take this action, but without result.

After the drains and culverts are extended so that there is no flow of polluted water into the tract included between the railroad embankment and the original shore line, then the local Board of Health should have the owners of the adjacent property fill the space to a hight above high tide and properly grade the surface.

The provisions of law under whcih the State Board may act are in chapter 661, Laws of 1893, the General Health Law, article 1, section 6, is as follows:

§ 6. Nuisances.—The state board of health shall have all necessary powers to make examinations into nuisances, or questions affecting the security of life and health in any locality. Whenever required by the governor of the state, it shall make such an examination and shall report the results thereof to the governor, within the time prescribed by him therefor. The report of every examination, when approved by the governor, shall be filed in the office of the secretary of state, and the governor may declare the matters public nuisances, which may be found and certified in any such report to be nuisances, and may order them to be changed, abated or removed as he may direct. Every such order shall be presumptive evidence of the existence of such nuisance; and the governor may, by a precept under his hand and official seal, require the district attorney, sheriff and other officers of the county where such nuisance is maintained, to take all necessary measures to execute such order and cause it to be obeyed and the acts of any such county officer in the abatement of any such nuisance, reason-

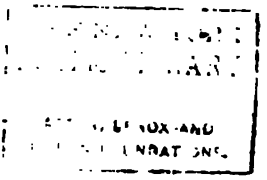
able or necessary for such abatement, shall be lawful and justifiable, and the order of the governor a sufficient protection to such officer. The expense of such abatement shall be paid by the municipality where the nuisance occurs, and shall be a debt recoverable by such municipality of all persons maintaining it or assisting in its maintenance, as a lien or charge upon the lands upon which the nuisance is maintained, which may be enforced by sale of such lands to justify the same.

I recommend that the State Board of Health pass a resolution to the following effect.

Resolved, That the discharge of sewage, house drainage or street drainage into the area included between the embankment of the Staten Island Rapid Transit Railroad Company and that portion of the street or road known as Richmond Terrace between Church street and Nicholas street in the village of New Brighton, Richmond county, is in the opinion of this board a public nuisance.

Resolved, That the trustees of the said village of New Brighton be notified that unless all pipes, drains and culverts which can now discharge sewage, house drainage or street drainage into the area above described be extended beyond the said railroad embankment within thirty days from the date of this notice in such a manner as to ensure the discharge of sewage, house drainage or street drainage into tide water outside of said embankment, the State Board of Health will forthwith report to the Governor the existence of such nuisance in order that the Governor may take action in the premises in accordance with the statute.

Resolved, That the local Board of Health of the village or New Brighton, Richmond county, be informed that in the opinion of the State Board of Health, the area included between the embankment of the Staten Island Rapid Transit Company and that portion of Richmond Terrace between Church street and Nicholas street, in the village of New Brighton, Richmond county, should be filled to a height above high tide and porperly graded as soon as the pipes, drains or culverts, which can now discharge sewage, house drainage or street drainage into said area are extended beyond the railway embankment.



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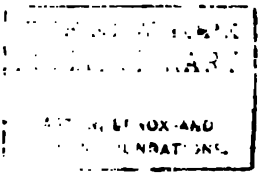
Resolved, That the trustees of the said village of New Brighton be notified that unless all pipes, drains and culverts which can now discharge sewage, house drainage or street drainage into the area above described be extended beyond the said railroad embankment within thirty days from the date of this notice in such a manner as to ensure the discharge of sewage, house drainage or street drainage into tide water outside of said embankment, the State Board of Health will forthwith report to the Governor the existence of such nuisance in order that the Governor may take action in the premises in accordance with the statute.

Resolved, That the local Board of Health of the village or New Brighton, Richmond county, be informed that in the opinion of the State Board of Health, the area included between the embankment of the Staten Island Rapid Transit Company and that portion of Richmond Terrace between Church street and Nicholas street in the village of New Brighton, Richmond county, should be filled to a height above high tide and porperly graded as soon as the pipes, drains or culverts, which can now discharge sewage, house drainage or street drainage into said area are extended beyond the railway embankment.



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I also suggest that I be informed of the date of such notifications if issued, so as to report whether their requirements are complied with.

I return herewith the original complaint, an amended complaint with correction of a clerical error, and a map of the locality.

Respectfully submitted,

JOHN BOGART,

Consulting Engineer.

ALBANY, N. Y., *April* 18, 1895.

To the President of the Board of Health of the Village of New Brighton:

Dear Sir.— I am directed to inform you that at a meeting of the State Board of Health, held on April 12, 1895, the following resolutions were adopted:

Resolved, That the discharge of sewage, house drainage or street drainage into the area included between the embankment of the Staten Island Rapid Transit Railroad Company and that portion of the street or road known as Richmond Terrace, between Church street and Nicholas street in the village of New Brighton, Richmond county, is in the opinion of this board a public nuisance.

Resolved, That the trustees of the said village of New Brighton, be notified that unless all pipes, drains and culverts which can now discharge sewage, house drainage or street drainage into the area above described be extended beyond the said railroad embankment within 30 days from the date of this notice in such manner as to ensure the discharge of sewage, house drainage or street drainage into tide water outside of said embankment, the State Board of Health will forthwith report to the Governor the existence of such nuisance in order that the Governor may take action in the premises in accordance with the statute.

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be filled to a height above high tide, and properly graded as s
as the pipes, drains or culverts, which can now discharge sewa
house drainage or street drainage into said area are exten
beyond the railway embankment.

It is requested that your board comply with the recommen
tions in the third resolution.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary

OFFICE OF THE BOARD OF
HEALTH OF THE VILLAGE OF NEW BRIGHTON,
NEW BRIGHTON, S. I., *April* 24, 189

DR. J. F. BARNES:

Dear Sir.— Your letter of April 18th, was duly received, and
reply would say, that the trustees have awarded the contract
carry out the recommendations of Engineer Bogart, which w
will be completed as soon as possible, and as directed by the St
Board of Health.

Very respectfully, your obedient servant,

AUGUSTUS ACKER,
Secretary

ALBANY, N. Y., *April* 18, 189

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In compliance with the above resolutions, you are hereby notified that unless the instructions are complied with, the Governor will be requested to take action under section 6, chapter 661, of the Laws of 1893.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

OFFICE OF THE BOARD OF TRUSTEES OF THE
VILLAGE OF NEW BRIGHTON, RICHMOND COUNTY, N. Y.

NEW BRIGHTON, N. Y., *April* 20, 1895.

To New York State Board of Health, Albany, N. Y.:

Gentlemen.— Your favor of 18th inst., received, in reply would state that the board of trustees have already taken steps to abate the nuisance referred to, as per copy of advertisement enclosed, we expect to award the contract on the 23d prox., and the improvement will be promptly made, trusting that this will be satisfactory, I remain,

Respectfully yours,

J. H. MALOY,
President of the Board of Trustees, Village of New Brighton.

ber of other residents in the vicinity and also the health officer and members of the board of health of the village of New Brighton and Mr. G. Rappenecker, trustee of the village.

I found the following conditions:

The Staten Island Rapid Transit Railway is built in front of this portion of the shore of Staten Island upon an embankment cutting across the line of a cove which existed in the natural concave shore-line at this place. The street or terrace on which are the premises of the complainant, and of several neighbors, is at a considerable elevation (about 15 feet) above the water, and there is a sloping bank from the street to the water of the bay, which, before the construction of the railway, came directly to the foot of this sloping bank. The construction of the railway has inclosed a space between the foot of this bank and the railway embankment about 900 feet long and 75 feet wide at the centre. The railway embankment, though faced with heavy rip-rap stone, seems sufficiently solid to prevent much passage of water through it. There are one or more street drain pipes entering into this pool, and some house sewage had recently been flowing into it. This latter, however, I was informed had been corrected. The condition of the water in this pool and of the soil at its sides and bottom was filthy and a menace to health. It was clearly evident that no street washings nor drainage, nor sewage should be permitted to be delivered into this pool; that all sewers or pipes or culverts from streets should be extended to the water outside the railway embankment, and also that the pool should be filled above the water level.

I found that the local board of health had appreciated the necessity of such action. In 1892 the board of health requested the trustees of the village of New Brighton to build a sewer on the terrace along this property. The sewer was never built. I am informed that when the railroad was constructed, the property owners had the right of an outlet for their sewers across the railroad embankment, but this was availed of only in one case; other sewage discharged directly into the pool, into which, however, the tide ebbed and flowed through a 24-inch pipe through the

railway embankment opposite the premises of Mr. Geo. Edward Harding. The flow through this pipe had, however, been stopped by the filling of the pool in front of Mr. Harding's property, and several house sewers had been connected with this pipe. This had been done in compliance with orders of the board of health, served upon each of the property owners, to extend the waste pipes of their houses beyond the railroad.

The board of health had also petitioned the board of trustees of the village to extend the street drain or culvert at the foot of Church street to and through the railroad embankment, and also to provide outlet for other culverts emptying into the pool.

The board of health had also considered the advisability of ordering the pool to be filled, but had not issued an order to that effect because they thought the trustees should first extend the street drains or culverts just mentioned.

During my visit on September 11, 1894, I met Mr. Rappenecker, a trustee of the village, and representing the ward in which this property is located. He told me that he appreciated the necessity of extending the drains or culvert beyond the pool and through the railway embankment, and that he would immediately present the matter to the board of trustees, and that he believed action would be at once taken. With this assurance the members of the board of health determined to order the pool to be filled, and any waste pipes discharging into the pool to be extended through the railroad embankment.

As such action on the part of the trustees and of the Board of Health would abate the nuisance, further proceedings on my part were temporarily postponed.

Directly afterwards on September 18, 1894, trustee Rappenecker, offered, and there was adopted by the Board of Trustees, a resolution directing the clerk of the board to request the cooperation of the Staten Island Rapid Transit Railroad Company in the construction of two storm water culverts under the railroad, in order that the place in question might be properly drained. On the same date the Board of Health directed that orders be served on the property owners to make the filling required within thirty

days, and these orders were directly served on these property owners, as was also an order on one of them to extend the waste pipe of his premises under the railroad to the water.

On October 27th, I again made an inspection of the locality and met Mr. Carrere, Trustee Rappenecker, Dr. Walser the Health Officer, and alsoo the president and secretary of the Board of Health. I found that the orders above referred to had been served by the Board of Health; that some property owners had requested an extension of time for compliance, in order that filling might be obtained; and also requesting that the connections of street drains or culverts should be made before the filling and suggesting that if such extensions were made there might be no necessity for any filling. The trustee stated that there was a question as to the respective liability of the village and the railroad to make the extensions of the street culverts, or to share the cost of such extensions. He also stated that negotiations were in progress with the proper officers of the railroad, that he still appreciated the necessity of these extensions, and that he would give attention to the matter immediately.

Considerable additional filling had been made in portions of the pool.

Seeing that if the extensions to tide water were made of all pipes entering this pool, and if then the pool should be properly filled, there would be no reason for additional action by the State Board of Health, and believing that the trustee intended to have these extensions made, further proceedings were again postponed, but with the express statement, that if these extensions of pipes should not be made before the approach of another warm season, I would recommend summary action by the State Board of Health.

I have now again visited the premises and find that the extensions of the culverts or drain pipes have not been made. Additional fillings had been done, but there still remain portions of the pool with standing water, and in my opinion unless the action indicated above is taken, conditions will result on the advent of hot weather, which will be a menace to health, which may properly be declared a nuisance, and in regard to which the State

Board of Health may suitably take the action provided by statute.

The first thing that must be done is the extension of the street drains or culverts through the railroad embankment. This must be done by the trustees of the village of New Brighton. If the railroad is liable for a portion of the expense of this work, the village can afterwards recover the proper amounts from the railroad under legal process. Action necessary to the public health should not await the settlement of such questions. The local Board of Health has repeatedly requested the trustees of the village to take this action, but without result.

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I recommend that the State Board of Health pass a resoluti to the following effect.

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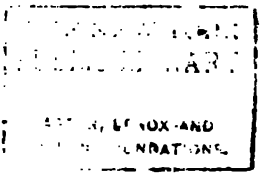
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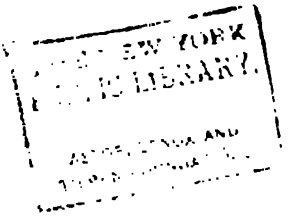
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I also suggest that I be informed of the date of such notifications if issued, so as to report whether their requirements are complied with.

I return herewith the original complaint, an amended complaint with correction of a clerical error, and a map of the locality.

Respectfully submitted,

JOHN BOGART,

Consulting Engineer.

ALBANY, N. Y., *April* 18, 1895.

To the President of the Board of Health of the Village of New Brighton:

Dear Sir.— I am directed to inform you that at a meeting of the State Board of Health, held on April 12, 1895, the following resolutions were adopted:

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Resolved, That the trustees of the said village of New Brighton, be notified that unless all pipes, drains and culverts which can now discharge sewage, house drainage or street drainage into the area above described be extended beyond the said railroad embankment within 30 days from the date of this notice in such manner as to ensure the discharge of sewage, house drainage or street drainage into tide water outside of said embankment, the State Board of Health will forthwith report to the Governor the existence of such nuisance in order that the Governor may take action in the premises in accordance with the statute.

Resolved, That the local board of health of the village of New Brighton, Richmond county, be informed that in the opinion of the State Board of Health, the area included between the embank-

ment of the Staten Island Rapid Transit Company and that portion of Richmond Terrace, between Church street and Nicholas street, in the village of New Brighton, Richmond county, should be filled to a height above high tide, and properly graded as soon as the pipes, drains or culverts, which can now discharge sewage, house drainage or street drainage into said area are extended beyond the railway embankment.

It is requested that your board comply with the recommendations in the third resolution.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

OFFICE OF THE BOARD OF
HEALTH OF THE VILLAGE OF NEW BRIGHTON,
NEW BRIGHTON, S. I., *April* 24, 1895.

DR. J. F. BARNES:

Dear Sir.— Your letter of April 18th, was duly received, and in reply would say, that the trustees have awarded the contract to carry out the recommendations of Engineer Bogart, which work will be completed as soon as possible, and as directed by the State Board of Health.

Very respectfully, your obedient servant,

AUGUSTUS ACKER,
Secretary.

ALBANY, N. Y., *April* 18, 1895.

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Resolved, That the trustees of the said village of New Brighton, be notified that unless all pipes, drains and culverts which can now discharge sewage, house drainage or street drainage into the area above described, be extended beyond the said railroad embankment within 30 days from the date of this notice, in such manner as to ensure the discharge of sewage, house drainage or street drainage into tide water outside of said embankment, the State Board of Health will forthwith report to the Governor the existence of such nuisance in order that the Governor may take action in the premises in accordance with the statute.

In compliance with the above resolutions, you are hereby notified that unless the instructions are complied with, the Governor will be requested to take action under section 6, chapter 661, of the Laws of 1893.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

OFFICE OF THE BOARD OF TRUSTEES OF THE
VILLAGE OF NEW BRIGHTON, RICHMOND COUNTY, N. Y.

NEW BRIGHTON, N. Y., *April* 20, 1895.

To New York State Board of Health, Albany, N. Y.:

Gentlemen.— Your favor of 18th inst., received, in reply would state that the board of trustees have already taken steps to abate the nuisance referred to, as per copy of advertisement enclosed, we expect to award the contract on the 23d prox., and the improvement will be promptly made, trusting that this will be satisfactory, I remain,

Respectfully yours,

J. H. MALOY,
President of the Board of Trustees, Village of New Brighton.

NOTICE TO CONTRACTORS.

CLERK'S OFFICE,
VILLAGE OF NEW BRIGHTON, *April* 3, 1895.

Sealed bids and proposals for the construction of a Storm Water Sewer at the foot of Church and Nicholas streets in the village of New Brighton will be received at the office of the undersigned until the 16th day of April, 1895, at 8 P. M.

Plans, profiles and specifications may be examined at this office daily from 9 A. M. to 4 P. M.

Bidders must apply at this office for blank forms upon which all bids must be written, and the bond accompanying the same duly executed by two securities in an amount double the amount of the bid.

The Board of Trustees reserve the right to reject any or all bids received under this advertisement.

By order of the Board of Trustees.

JOSEPH F. O'GRADY.
Clerk.

The time for opening said bids and proposals in the above-mentioned contract is hereby extended to Tuesday, April 23, 1895, at the same hour and place.

By order of the Board of Trustees.

JOSEPH F. O'GRADY,
Clerk.

Dated *April* 16, 1895.

ALBANY, N. Y., *April* 23, 1895.

To Mr. J. H. MALOY, *President of the Board of Trustees, Village of New Brighton:*

Dear Sir.— Your letter of the 20th instant reporting that the board of trustees have already taken steps to abate the nuisance referred to in our letter of the 8th instant, as per copy of advertisement which you inclose, has been received.

In reply we would state that your communication will be laid before the State Board for its consideration, at a meeting to be held on the 26th instant.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

FOODS AND DRUGS.

REPORT

OF

WILLIS G. TUCKER, PH. D.,

Director State Board of Health Laboratory.

BAXTER T. SMELZER, M. D., *Secretary State Board of Health of New York, Albany, N. Y.:*

Sir.— During the year ending December 31, 1895, the work of this laboratory has been continued, but the collection and examination of drugs was suspended on June 1 on account of the insufficiency of funds available for the purpose. I deem this to have been very unfortunate, as the work was well established, economically conducted, and productive of good results. At the time of making my last annual report there remained on hand and unexamined 243 samples of drugs, and 887 additional samples were collected prior to the suspension of this part of the work of the laboratory, making in all, 1,130 samples which were examined and reported upon before the work was discontinued, and this number would have been considerably larger but for the fact that for over a month we were without the services of a collector. These samples were collected from 15 localities, viz.: Batavia, Bath-on-the-Hudson, Buffalo, Chatham, Cohoes, Dunkirk, East Albany, Fredonia, Gloversville, Greenbush, Green Island, Hudson, Johnstown, Schenectady and Troy, and they included 27 articles, all being official drugs or preparations, as follows: Diluted acetic acid, alcohol, ammonia water, chloroform, creosote, ether, compound spirit of ether, Fowler's solution, syrup of hydriodic acid, diluted hydrobromic acid, diluted hydrochloric acid, solution of hydrogen di-oxide, compound solution of iodine, tincture of

iodine, reduced iron, diluted phosphoric acid, potassium bi-tartrate, potassium bromide, saffron, seidlitz powders, sodium bromide, aromatic sulphuric acid, diluted sulphuric acid, precipitated sulphur, washed sulphur, distilled water, whisky.

These samples were, as heretofore, reported upon as examined from month to month, averaging 226 samples per month. Since July 1, 1891, when all the chemical work of the board was placed under my charge, 10,353 samples of foods and drugs have been examined and reported, being a monthly average of over 220 samples, in addition to 219 samples of water which have been analyzed, and the many other analyses made and special investigations conducted. The average cost of the samples collected during the year was 16.3 cents, which sum includes the traveling expenses of the collector.

The number of samples of drinking water examined during the year was 43, and they were received from the following places: Bainbridge, Berlin, Binghamton (3), Caledonia (3), Candor, Chatham (2), Churchville (2), Corinth, Delhi (2), Easton, Ellenville (3) Forestville, Gowanda (2), Hoosick Falls, Hudson (2), Mount Vernon (2), Port Jervis, Potsdam (9), Roxbury (2), Schenevus, Suspension Bridge (2).

The water examinations so far made have been confined to the chemical analysis of the waters. Frequent cases have arisen in which a bacteriological examination has been desired, and it is to be regretted that no facilities exist by which work of this nature can be done in connection with the work of the board. Such examinations are sometimes made by chemists, but they are generally, and properly, relegated to expert bacteriologists, since superficial, or merely perfunctory, work in such a field is of no value whatever. Without expressing an opinion as to the precise value, at the present time, of bacteriological examination of drinking water in determining their hygienic quality, since the positive identification of pathogenic bacteria in natural waters is generally conceded by those who are best informed upon the matter to be exceedingly difficult, and very often impossible, must at least be admitted that there are many cases in which

such examination may afford important information. Comparative examinations made of the same water supply, as, for instance, in the case of rivers and streams, at different points, stages and seasons, if made by the same bacteriologist, and in precisely the same manner, may afford very valuable information in certain cases, as may also the continuous examination of waters from filtering plants, the effluents from treated sewage, etc., but single examinations for the purpose of determining whether a given water does or does not contain typhoid or other pathogenic bacilli, can seldom be of much value, because a definite answer can seldom be given to the question as a result of such examination. The public at large, and many physicians and others who ought to know better, think differently, and believe it to be an easy matter to recognize disease germs in water, and it is greatly to be hoped, and is, indeed, fairly to be expected, that in the near future this task may be successfully accomplished. Possibly the method recently proposed by Elsner may serve the purpose, but, whether it does or does not, there are many investigations in bacteriology which might profitably be undertaken by the board had it the proper facilities for carrying on such work and an appropriation sufficient to maintain it. The need of such facilities can not, therefore, be too strongly emphasized. In such matters this State ought to lead, and not fall behind many other States in the practical application of scientific methods to the solution of health problems.

During the past year monthly reports on all work, whether in the direction of food and drug examination, water analysis, or miscellaneous work referred to the laboratory, have been made, and in the case of drugs examined these reports have been accompanied by separate reports on each sample which has been found on examination to be of inferior quality or ortherwise materially to vary from the pharmacopoeial or other established standards. These reports have stated the record number and the precise name of each article as it has been called for in writing by the collector; the name and place of business of dealer from whom sample was purchased; the date of the purchase; amount called for; the price

paid for the same; the name of the collector, and the quality of the article, as determined by the examination made. Essentially the same standards have been employed that have heretofore been used and in the case of parmacopoeial articles these have been adapted to the revised pharmacopoeia of 1890 which went into effect January 1, 1894. Concerning these standards I quote from my last annual report:

"Samples are classed as 'good quality' when they fulfill the requirements of the United States Pharmacopoea or fall below the same only in some trifling and unimportant respect; of 'fair quality' if, while not fully up to the pharmacopoeial standard, they are evidently neither intentionally adulterated nor decidedly below such standard, and of 'inferior quality' if clearly adulterated or falsified, lacking in any important constitutent, deficient in strength from improper manufacture, partial or complete decomposition or other causes, or containing an undue amount of impurity. In some cases, through ignorance or intent, a wrong article has been sold or some inferior article of a nature similar to that called for has been substituted, and such samples have been classed under the head 'not as called for.' Articles like the diluted acids, possessing excessive strength, have been classed under that head. The reports have also stated the respects in which samples not of good quality have been found to be deficient or inferior, and have given such other particulars as have been deemed necessary in special cases."

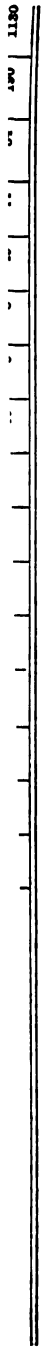
Not having been published elsewhere these reports are now collated and appended. The drugs collected and examined have included many of the most important parmacopoeial preparations, but such medicinal articles as experience has shown to be seldom or never adulterated or inferior in quality have purposely been omitted in the collection of samples, such articles only having been chosen as are known to be often of inferior quality or strength, or liable to deterioration through improper preparation or preservation. And, therefore, as stated in previous reports, no attempt has been made "to collect a large variety of articles since the object of the work conducted has been not the determination of

the ratio of adulteration, which is in itself a fact of little importance, but the correction of abuses, the rectification of errors and the information of pharmacists as to the necessity for extreme caution, both in the selection of their stock and in the preparation and dispensing of medicinal articles. Notices have been promptly sent, from the central office, to all dealers whose samples have been found to be of unsatisfactory quality, and they have been warned to cease the sale of such articles. These notifications have had a salutary effect in correcting many errors and in improving the quality of the drugs sold in the State, but as they may fail to accomplish all that is desired, a list has been kept of those dealers whose samples have repeatedly been found to be of inferior quality, and it is proposed to deal more summarily with some of them in the future. Pharmacists, as a class, are intelligent men who desire to carry on an honorable business in a legitimate manner, and in the majority of instances information as to errors committed by them is sufficient to lead to their correction. The work of the board in this direction, is believed to have accomplished good results and probably better than if a more rigid enforcement of the letter of the law had been attempted."

The accompanying table gives both the name and the place of business of all dealers from whom samples have been purchased with the results of the examination of the samples. As all articles have been called for by a written order, trivial or common trade names having never been employed but the precise pharmacopœial title of each article having been given, no valid excuse can be urged for errors which may have been made in filling these orders. The table immediately following gives a list of drugs examined, the number of each collected and examined, and the places where purchased.

Table of Samples, Etc.

ARTICLES.	PLACE WHERE PURCHASED.															
	Batavia.	Bath-on-Hudson.	Buffalo.	Chatham.	Cohoes.	Dunkirk.	East Albany.	Fredonia.	Gloversville.	Greenbush.	Green Island.	Hudson.	Johnstown.	Schenectady.	Troy.	Totals.
Acetic acid, diluted	.....	.....	39	.....	6	.....	.....	.....	.....	.....	1	.....	.....	.....	5	51
Alcohol	.....	.....	5	.....	9	.....	.....	.....	.....	.....	1	.....	.....	.....	10	25
Ammonia water	4	.....	27	3	.....	3	.....	3	7	.....	.....	6	5	12	.....	70
Chloroform	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23	23
Creosote	.....	.....	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
Ether	5	1	26	.....	8	5	.....	2	.....	1	1	.....	.....	.....	23	72
Ether, compound spirit of	4	.....	26	2	.....	5	.....	3	5	.....	.....	6	5	10	.....	66
Fowler's solution	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	5	.....	.....	6
Hydriodic acid, syrup of	4	.....	24	.....	.....	5	.....	3	.....	.....	.....	.....	.....	.....	.....	36
Hydrobromic acid, diluted	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
Hydrochloric acid, diluted	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Hydrogen dioxide, solution of	4	.....	26	.....	7	5	.....	3	.....	.....	1	.....	.....	.....	5	51
Iodine, compound solution of	.....	.....	.....	1	.....	.....	.....	.....	4	.....	.....	3	3	7	12	30
Iodine, tincture of	.....	2	40	.....	9	.....	2	.....	.....	1	1	.....	.....	.....	16	71
Iron, reduced	4	1	24	3	4	4	1	3	4	1	1	.....	3	.....	16	69
Phosphoric acid, diluted	.....	2	40	3	7	.....	2	.....	6	1	1	7	4	12	19	104
Potassium bitartrate	.....	.....	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	49
Potassium bromide	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	21
Saffron	.....	1	15	.....	.....	.....	1	.....	5	1	.....	2	3	5	16	49
Seidlitz powder	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
Sodium bromide	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	5
Sulphuric acid, aromatic	.....	2	15	2	.....	.....	1	.....	5	1	.....	5	5	11	15	62
Sulphuric acid, diluted	.....	.....	38	3	.....	.....	.....	.....	4	.....	.....	7	3	12	1	68
Sulphur, precipitated	.....	.....	38	3	5	.....	.....	.....	3	.....	1	7	5	8	.....	68



METHODS OF ANALYSIS.

None but official (pharmacopoeial) drugs and preparations having been collected, and the standard of quality prescribed by the Pharmacopoeia being the legal standard to which articles included therein must conform, the pharmacopoeial tests and analytical methods have been generally followed. While exhaustive analyses have not often been necessary, at least one quantitative determination has been made in most cases. The examination has in each case been sufficient to determine whether the article deviated in any material respect from the standard of quality prescribed in the pharmacopoeia, and more than this has seldom been necessary.

SUMMARY OF RESULTS.

Of the 1,130 samples of drugs examined there were classed as of

Good quality	540 or 47.8	per cent.
Fair quality	136 or 12.0	per cent.
Inferior quality	335 or 29.6	per cent.
Not as called for	75 or 6.7	per cent.
Excessive strength	44 or 3.9	per cent.

As stated in previous reports the above percentages "by no means represent the proportions of good, bad or indifferent drugs on the market and on sale at the stores, since only articles which were considered likely to be adulterated or known to be frequently of inferior quality were collected. Had samples of drugs and pharmaceutical preparations been selected at random the proportion of good and pure articles would have been very much larger. The ratio of actual adulteration is, therefore, very much lower than these figures seem to indicate, since, as above stated, practically only those articles which are known to be frequently adulterated, sophisticated, or otherwise of inferior quality have been collected. The samples reported as "inferior" include a large number of samples of ether, for which the commercial article is often sold, and of reduced iron, which is seldom found in the stores of the pharmacopoeial quality. The samples wrongly sold and reported

above as "not as called for" consisted chiefly of creosote for which crude carbolic acid is very commonly sold, and of saffron, for which safflower is very commonly substituted, while the articles reported as of "excessive strength" were mainly diluted acids, often improperly prepared, and ammonia water, for which the stronger ammonia water, improperly diluted, is not infrequently dispensed.

The following were the articles examined:

Diluted Acetic Acid. (*Acidum Aceticum Dilutum, U. S. P.*)

Fifty-one samples were examined, of which there were of good quality, twelve; fair, sixteen; inferior, twenty; and excessive strength, three. There are probably few articles of the pharmacopeia which are more frequently carelessly prepared and, therefore, of more variable strength than this preparation.

Diluted acetic acid should contain 6 per cent. of absolute acid. Samples containing from 5.5 to 7.5 per cent. have been rated as good; 4.5 to 5.4 per cent., fair; under 4.5 per cent., inferior; and over 7.5 per cent., as of excessive strength. The samples examined varied from 2.10 to 30.90 per cent., and many of them had evidently been prepared without any regard to accuracy, and in some cases the practically undiluted acid was sold. While it is not expected that such preparations will be made with scientific precision, gross carelessness in their preparation is entirely inexcusable. Diluted acetic acid is employed in the preparation of "spirits of mindererus," and if it is below or above the proper strength this solution will be either alkaline or acid in reaction, neither of which conditions is desirable. The following table gives a description of each of the samples:

Diluted Acetic Acid, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. absolute acid.	Quality.
	1895.				
9666	March 9	Drake & Moffit	Troy	3.7	Inferior.
9667	9	Spotten's Pharmacy	do	5.3	Fair.
9668	9	J. M. Donnelly	do	4.1	Inferior.
9669	9	D. F. Magill	do	5.0	Fair.
9670	9	W. H. Wilkinson	do	4.2	Inferior.
9729	21	Frank M. Clute	Cohoes	4.9	Fair.
9730	21	P. H. Spillane	do	3.6	Inferior.
9731	21	M. McDermott	do	4.2	do
9732	21	Archibold Bros	do	5.1	Fair.
9733	21	D. Hermans	do	4.1	Inferior.
9734	21	Thos. T. Kennedy	do	3.9	do
9735	21	John E. Grady	Green Island	5.3	Fair.
10151	27	R. K. Smither	Buffalo	4.0	Inferior.
10152	27	J. C. Landsheft	do	3.4	do
10153	27	C. W. Armstrong	do	7.5	Good.
10154	27	Wm. D. Rose	do	3.8	Inferior.
10155	27	Hubbard & Co	do	5.1	Fair.
10156	27	H. C. Cleveland	do	4.8	do
10157	27	C. W. Teurke	do	3.4	Inferior.
10158	27	E. H. Beaman	do	4.1	do
10159	27	P. M. Lockie	do	4.5	Fair.
10160	27	Geo. W. Sayles	do	13.4	Excessive strength.
10161	27	Robert E. Jones	do	4.7	Fair.
10162	27	R. S. Fowler	do	4.6	do
10163	27	W. H. Chase	do	30.9	Excessive strength.

10173	28	G. O. Baxter	do	4.1	Inferior.
10174	28	E. N. Bargar	do	6.7	Good.
10175	28	J. W. Menzies	do	3.4	Inferior.
10176	28	Wm. Cowlson Drug Co.	do	5.3	Fair.
10177	28	Smith's Drug Store	do	4.8	Fair.
10178	28	F. M. Dunning	do	2.2	Inferior.
10179	28	M. Van Every	do	5.8	Good.
10180	28	E. L. A. Schwabe	do	5.2	Fair.
10181	28	J. E. Smith	do	5.8	Good.
10182	28	A. J. Lies	do	8.9	Excessive strength.
10183	28	A. J. Werner	do	6.1	Good.
10184	28	Geo. Reiman	do	5.5	do
10185	28	J. L. Perkins & Co	do	5.5	do
10186	28	J. M. Horton	do	6.4	do
10187	28	Gibbs & Felch	do	5.7	do
10188	28	C. F. Wohrle	do	4.2	Inferior.
10189	28	F. L. Anderson	do	6.2	Good.

Alcohol. (*Alcohol, U. S. P.*)

Twenty-five samples examined, all of which were of good quality. The pharmacopoeia requires a specific gravity of about 0.820 at 59 degrees Fahrenheit. The samples examined varied from 0.810 to 0.845, as shown in the following table:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1895.				
9656	March 9	Henry Schneider	Troy	0.820	Good
9657	9	Cavanaugh & Perkins	do	0.822	do
9658	9	Geo. T. Butler & Co.	do	0.817	do
9659	9	Paulus' Pharmacy	do	0.818	do
9660	9	Wm. H. Flandrau	do	0 824	do
9661	9	W. L. Schneider	do	0.819	do
9662	9	G E. Stillman & Co.	do	0.826	do
9663	9	H. G. Swart	do	0.820	do
9664	9	Jacob Eagle	do	0.820	do
9665	9	J. T. O'Sullivan	do	0.821	do
9711	21	Frank M. Clute	Cohoes	0.820	do
9712	21	Dan'l S. Dodge	do	0.829	do
9713	21	Jas. S. Calkins	do	0.829	do
9714	21	Wm. Brown	do	0.821	do
9715	21	P. H. Spillane	do	0.845	do
9716	21	M. McDermott	do	0.820	do
9717	21	Archibald Bros	do	0.819	do
9718	21	L. A. Bellegarde	do	0.822	do
9719	21	D. Hermans	do	0.820	do
9720	21	John E. Grady	Green Island	0.825	do
10299	29	E. J. Liebetrut	Buffalo	0.810	do
10300	29	C. J. Dwyer	do	0.810	do
10301	29	Chas. A. Drefs	do	0.815	do
10302	29	M. J. Frisch	do	0.813	do
10303	29	Louis Weinmar	do	0.811	do

cent., and an examination of the following table will show that while in many cases an article very deficient in strength is sold, in many other cases the stronger solution is dispensed with little or no dilution:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of ammonia gas.	Quality.
	1894.				
9252	December 20	C. E. Purington & Co.	Johnstown	7.7	Fair.
9253	20	J. F. Cahill	do	14.7	Excessive strength.
9254	20	Sutliff & Livingston	do	8.3	Fair.
9255	20	W. B. Van Vliet	do	15.9	Excessive strength.
9256	20	D. H. Van Hensen	do	12.5	Good.
9257	20	Houck & Patrick	Gloversville	7.7	Fair.
9258	20	Estate of J. B. Stone	do	17.4	Excessive strength.
9259	20	A. M. Simmons	do	3.7	Inferior.
9260	20	J. T. Avery	do	12.2	Good.
9261	20	G. Rowe	do	15.5	Excessive strength.
9262	20	J. A. Miller & Co	do	7.2	Inferior.
9263	20	J. A. Van Auken	do	23.7	Excessive strength.
9264	22	A. J. Fellows	Chatham	12.5	Good.
9265	22	H. J. Barringer, Jr.	do	4.5	Inferior.
9266	22	Washburn & Seymour	do	11.3	Good.
9267	22	C. S. Hanks	Hudson	11.0	do
9268	22	Van Tassel & Tobey	do	6.7	Inferior.
9269	22	J. M. Johnson	do	7.8	Fair.
9270	22	Rice Bros	do	7.0	Inferior.
9271	22	Byron, Stedman	do	13.4	Excessive strength.
9272	22	Wardle & Son	do	8.5	Fair.
9273	22	Roy, Webber	Schenectady	7.3	Inferior.

Water of Ammonia — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent of ammonia gas.	Quality.
	1894.				
9274	December 22	H. S. Moore	Schenectady	9.5	Good.
9275	22	Van Zandt & Rector	do	5.1	Inferior.
9276	22	G. E. Duryee	do	6.8	do
9277	22	Wm. Sauter	do	7.5	Fair.
9278	22	J. T. Lyon	do	16.7	Excessive strength.
9279	22	E. Rosa	do	8.8	Fair.
9280	22	A. T. Veeder & Son	do	6.4	Inferior.
9281	22	G. Steinfuhrer	do	8.6	Fair.
9282	22	C. H. Horstmann	do	7.7	do
9283	22	H. A. Kerste	do	22.8	Excessive strength.
9284	22	H. B. Duryee	do	5.9	Inferior.
	1895.				
9815	March 25	Jewell's Pharmacy	Batavia	10.9	Good.
9816	25	W. S. & J. J. Patterson	do	12.2	do
9817	25	Cooley & Gould	do	6.2	Inferior.
9818	25	J. M. Walkinshaw	do	9.6	Good.
9819	25	John Harper	Dunkirk	5.4	Inferior.
9820	25	Monroe's Pharmacy	do	6.7	do
9821	25	F. K. Lyon	do	5.8	do
9822	25	F. H. Edmunds	Fredonia	18.6	Excessive strength.
9823	25	F. C. F. Sievert	do	8.9	Fair.
9824	25	Chatsey & Clothier	do	14.6	Excessive strength.
9825	26	J. R. Tanner	Buffalo	13.5	do

9838	26	Thomas' Drug Store	do		8.6	do
9839	26	Smither & Thurstone	do		14.3	Excessive strength.
9840	26	Rider's Drug Store	do		8.5	Fair.
9841	26	W. A. Kendall	do		8.9	do
9842	26	Kingston's Pharmacy	do		9.3	Good.
9843	26	Geo. A. Lawrence	do		12.5	do
9844	26	R. W. Grills	do		9.3	do
9845	26	Jeffrey & Gotshall	do		9.3	do
9846	26	Lyman & Sloan	do		15.7	Excessive strength.
9847	26	Stoddard Bros	do		10.7	Good.
9848	26	Howard Wade	do		8.5	Fair.
9849	26	P. S. McArthur	do		8·8	do
9850	26	A. B. Hoolihan & Co	do		7.3	Inferior.
9851	26	Bushnell's Pharmacy	do		7.7	Fair.

Chloroform. (*Chloroformum, U. S. P.*)

Twenty-three samples examined, of which there were of good quality, 21; and fair, 2. The pharmacopœia requires a specific gravity not below 1.490 at 15 degrees C. (59 degrees F.) The samples examined varied from 1.487 to 1.497. The quality of the chloroform now on sale is greatly superior to that formerly on the market. The following table gives particulars concerning the samples:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1895.				
9528	March 5	A. M. Knowlson	Troy	1.487	Good.
9529	5	C. H. Wiberly	do	1.495	do
9530	5	E. W. Stoddard	do	1.497	do
9531	5	Moncrief & Francis	do	1.496	do
9532	5	L. Burton & Co	do	1.496	do
9533	5	F. M. Brower & Co	do	1.495	do
9534	5	George W. Holcomb	do	1.497	do
9535	5	John J. Healy	do	1.497	Fair.
9536	5	H. J. Eagle	do	1.497	Good.
9537	5	Robert Glass	do	1.496	do
9538	5	Daniel A. Healy	do	1.496	do
9539	5	B. H. Gertzen	do	1.496	do
9540	5	C. Herzog	do	1.496	do
9541	5	H. Guadendorff	do	1.492	do
9598	9	Henry Schneider	do	1.494	do
9599	9	Cavanaugh & Perkins	do	1.493	do
9600	9	Paulus' Pharmacy	do	1.495	do
9601	9	William H. Flandrau	do	1.495	do
9602	9	W. L. Schneider	do	1.494	Fair.
9603	9	G. E. Stillman & Co	do	1.495	Good.

Creosote. (*Creosotum, U. S. P.*)

Thirty-eight samples examined. Creosote is defined in the pharmacopœia as "a mixture of phenols, chiefly guaiacol and creosol, obtained during the distillation of wood tar, preferably of that derived from the beech." Crude carbolic acid, sometimes designated in the trade "coal-tar creosote," and consisting chiefly of phenol and cresol, is very commonly sold for real creosote because much cheaper, but the substitution should not be made, as the articles possess different properties, and when creosote is called for, the true article should be supplied. Of the samples examined 14 were good, and one was fair quality, while the remaining 23 consisted chiefly of carbolic acid, as shown in the following table:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
10113	March 27	R. K. Smither	Buffalo	Chiefly carbolic acid; not real creosote. Error in sale.
10114	27	J. C. Landsheft	do	Chiefly carbolic acid; not real creosote. Error in sale.
10115	27	Nobb & Drake	do	Good.
10116	27	C. W. Armstrong	do	do
10117	27	Wm. D. Rose	do	Chiefly carbolic acid; not real creosote. Error in sale.
10118	27	Hubbard & Co.	do	Chiefly carbolic acid; not real creosote. Error in sale.
10119	27	H. C. Cleveland	do	Good.
10120	27	C. W. Tuerke	do	Chiefly carbolic acid; not real creosote. Error in sale.
10121	27	E. H. Beaman	do	Chiefly carbolic acid; not real creosote. Error in sale.
10122	27	P. M. Lockie	do	Chiefly carbolic acid; not real creosote. Error in sale.
10123	27	George W. Sayles	do	Good.
10124	27	Robert E. Jones	do	Chiefly carbolic acid; not real creosote. Error in sale.

Creosote — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
10125	March 27	R. S. Fowler	Buffalo	Good.
10126	27	J. S. Greey	do	do
10127	27	J. H. Kautz	do	do
10128	27	W. H. J. Smith	do	Chiefly carbolic acid; not real creosote. Error in sale.
10129	27	Vaughn's Pharmacy	do	Chiefly carbolic acid; not real creosote. Error in sale.
10130	27	Neil Mc Eachren	do	Fair.
10131	28	Warren E. Wolfe	do	Chiefly carbolic acid; not real creosote. Error in sale.
10132	28	H. J. Dimond	do	Chiefly carbolic acid; not real creosote. Error in sale.
10133	28	J. W. Hodson	do	Chiefly carbolic acid; not real creosote. Error in sale.
10134	28	R. H. Maltbie	do	Good.
10135	28	G. O. Baxter	do	Chiefly carbolic acid; not real creosote. Error in sale.
10136	28	E. N. Bargar	do	Chiefly carbolic acid; not real creosote. Error in sale.
10137	28	J. W. Menzies	do	Good.
10138	28	Wm. Coulson Drug Co.	do	Chiefly carbolic acid; not real creosote. Error in sale.
10139	28	Smith's Drug Store	do	Chiefly carbolic acid; not real creosote. Error in sale.
10140	28	F. M. Dunning	do	Good.
10141	28	M. Van Every	do	Chiefly carbolic acid; not real creosote. Error in sale.
10142	28	E. L. A. Schwabe	do	Chiefly carbolic acid; not real creosote. Error in sale.

10143	28	J. E. Smith	do	Good.
10144	28	A. J. Lies	do	do
10145	28	A. J. Werner	do	do
10146	28	George Reiman	do	Chiefly carbolic acid; not real creosote. Error in sale.
10147	28	J. L. Perkins & Co	do	Chiefly carbolic acid; not real creosote. Error in sale.
10148	28	Gibbs & Felch	do	Chiefly carbolic acid; not real creosote. Error in sale.
10149	28	C. F. Wohrle	do	Good.
10150	28	F. L. Anderson	do	Chiefly carbolic acid; not real creosote. Error in sale.

Ether. (*Aether, U. S. P.*)

The U. S. Pharmacopoeia of 1890, which went into effect January 1, 1894, recognizes but one quality of ether and this is essentially identical with the "stronger ether," or *Aether Fortior*, of the Pharmacopoeia of 1880. It is composed of "about 96 per cent., by weight of absolute ether or ethyl oxide, and about 4 per cent., of alcohol containing a little water." It should have a specific gravity of from 0.725 to 0.728 at 15 degrees C. (59 degrees F.). Some confusion has resulted from the change in nomenclature, but the pharmacist ought to be informed upon these subjects and know that the "aether" of the present pharmacopoeia practically corresponds to the "aether fortior" of the preceding one. The term "sulphuric ether" is not recognized in the pharmacopoeia. Ether is generally used as an anaesthetic, and ought always to be kept in stock by the pharmacist. When it is called by its official name it ought always to be supplied, and the substitution of ether of inferior quality, or the so-called "washed ether" of the trade, is entirely inexcusable, and betokens great carelessness or ignorance on the part of the seller.

Seventy-two samples of this important article were examined, of which there were of good quality, 22; and inferior, 50. The specific gravity of the samples examined varied from 0.723 to 0.803. Particulars concerning the samples are appended.

Ether. U. S. P.

Number of sample.	Date of collection	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1895.				
9483	March 4	Jas. H. Miller	Greenbush	0.751	Inferior.
9484	4	A. O. Roberts, M. D	Bath-on-Hudson	0.746	do
9485	5	A. M. Knowlson	Troy	0.725	Good.
9486	5	Chas. H. Wiberly	do	0.725	do
9487	5	E. W. Stoddard	do	0 725	do
9488	5	Moncrief & Francis	do	0.739	Inferior.
9489	5	E. M. Brower & Co	do	0.746	do
9490	5	Geo. W. Holcomb	do	0.750	do
9491	5	John J. Healy	do	0.747	do
9492	5	H. J. Eagle	do	0.764	do
9493	5	Robert Glass	do	0.753	do
9494	5	Dan'l A. Healy	do	0.751	do
9495	5	B. H. Gertzen	do	0.749	do
9496	5	C. Herzog	do	0.745	do
9497	5	H. Guadendorff	do	0.725	Good.
9588	9	Henry Schneider	do	0.726	do
9589	9	Cavanaugh & Perkins	do	0.727	do
9590	9	Geo. T. Butler & Co	do	0.727	do
9591	9	Paulus' Pharmacy	do	0.725	do
9592	9	Wm. H. Flandrau	do	0.756	Inferior.
9593	9	U. L. Schneider	do	0.748	do
9594	9	G. E. Stillman & Co	do	0.748	do
9595	9	H. G. Swart	do	0.748	do
9596	9	Jacob Eagle	do	0.755	do
9597	9	J. T. O'Sullivan	do	0.754	do
9702	21	Frank M. Clute	Cohoes	0.746	do
9703	21	Jas. S. Calkins	do	0.753	do
9704	21	Wm. Brown	do	0.753	do
9705	21	P. H. Spillane	do	0.748	do

Ether, U. S. P—(*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1895.				
9706	March 21	M. McDermott	Cohoes	0.727	Good.
9707	21	Archibald Bros	do	0.725	do
9708	21	L. A. Bellegarde	do	0.725	do
9709	21	Thos. T. Kennedy	do	0.758	Inferior.
9710	21	John E. Grady	Green Island	0.750	do
9888	25	S. A. Dustin	Batavia	0.758	do
9889	25	Jewell's Pharmacy	do	0.726	Good.
9890	25	W. S. & J. J. Patterson	do	0.748	Inferior.
9891	25	Cooley & Gould	do	0.729	Good.
9892	25	J. M. Walkinshaw	do	0.755	Inferior.
9893	25	John Harper	Dunkirk	0.759	do
9894	25	E. M. Davis	do	0.726	Good.
9895	25	Monroe's Pharmacy	do	0.753	Inferior.
9896	25	Van Scoter & West	do	0.752	do
9897	25	F. K. Lyon	do	0.749	do
9898	25	F. H. Edmunds	Fredonia	0.759	do
9899	25	F. C. F. Sievert	do	0.750	do
9900	26	M. Willoughby, M. D	Buffalo	0.747	do
9901	26	W. S. O'Brien	do	0.803	do
9902	26	C. N. Riggs	do	0.746	do
9903	26	Denny & Field	do	0.758	do
9904	26	Elwood & Thompson	do	0.728	Good.
9905	26	J. P. & J. W. Diehl	do	0.748	Inferior.
9906	26	W. G. Gregory	do	0 758	do
9907	26	W. C. Dambach	do	0.727	Good.
9908	26	Geo. E. Sykes	do	0.748	Inferior.
9909	26	F. J. Wiltse	do	0.753	do
9910	26	Blackney & Co	do	0.762	do
9911	26	C. Rodenbach	do	0.750	do

9912		26	Thomas Drug Store			
9913		26	Smither & Thurstone	do	do	0.731 Good.
9914		26	Rider's Drug Store	do	do	0.755 Inferior.
9915		26	W. A. Kendall	do	do	0.730 Good.
9916		26	Kingston's Pharmacy	do	do	0.726 do
9917		26	Geo. A. Lawrence	do	do	0.749 Inferior.
9918		26	R. W. Grills	do	do	0.760 do
9919		26	Jeffrey & Gotshall	do	do	0.749 do
9920		26	Lyman & Sloan	do	do	0.727 Good.
9921		26	Stoddart Bros.	do	do	0.758 Inferior.
9922		27	Howard Wade	do	do	0.726 Good.
9923		27	P. S. McArthur	do	do	0.748 Inferior.
9924		27	A. B. Hoolihan & Co	do	do	0.725 Good.
9925		27	Bushnell's Pharmacy	do	do	0.774 Inferior.
						0.761 do

Compound Spirit of Ether. (*Spiritus Aetheris Compositus, U. S. P.*)

Sixty-six samples examined, of which there were of good quality, 23; fair, 8, and inferior, 35. Concerning this article, which is a medicinal substance of real value but the use of which has been largely abandoned because so generally of little or no real value as sold in the stores, I quote from a previous report: "Compound spirit of ether or 'Hoffmann's anodyne' is frequently prescribed by physicians and often employed as a household remedy, and while an article of good quality can be procured from responsible manufacturers, or prepared without difficulty by the intelligent and careful pharmacist, the fact is that a spurious article, answering to none of the requirements of the pharmacopoeia, is generally sold in its stead, because it is cheaper." Hoffmann's anodyne has recently been quoted at 51 cents a pound in a price list published in a leading pharmaceutical journal, which is less than one-third the price of the real article. "This cheap, spurious and worthless article, obtained as a secondary product in the manufacture of ether, consists chiefly of alcohol, ether and water, with little or none of the ethereal oil upon which the virtue of the preparation largely depends. Dealers may urge that the sale of this spurious article as a household remedy to people who would complain of the price necessarily charged for a genuine article is excusable; but without admitting this as a valid excuse for dispensing a fraudulent and worthless drug, it is evident that its sale in response to a physician's prescription or written order, giving full title and specifying 'U. S. P.,' is entirely inexcusable and unwarranted and equally blameworthy, whether due to ignorance or cupidity. The habit of keeping two qualities of official drugs can not be too strongly condemned, but the results of the above examination would seem to show that many dealers, so far as this preparation is concerned, keep only one, and that a spurious article. When official preparations are called for they should be furnished by the dealer, or no sale made."

specific gravity of this preparation is not stated in the phar-
oeia, but it should be not far from 0.800. As made by the
is laid down in the pharmacopoeia of 1870, in which ether of
: gravity was employed and more of the ethereal oil was
.t had a specific gravity of 0.815, but the specific gravity alone
criterion of quality. The specific gravity of the samples ex-
d varied from 0.794 to 0.888. The following table gives par-
rs concerning the samples:

Compound Spirit of Ether, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1894.				
9224	December 20	C. E. Purington & Co.	Johnstown	0.799	Good.
9225	20	J. F. Cahill	do	0.804	Deficient in ethereal oil; inferior.
9226	20	Sutliff & Livingston	do	0.794	Good.
9227	20	W. B. Van Vliet	do	0.826	Fair.
9228	20	D. H. Van Heusen	do	0.809	Good.
9229	20	Houck & Patrick	Gloversville	0.804	do
9230	20	Estate of J. B. Stone	do	0.849	Deficient in ethereal oil; inferior.
9231	20	J. T. Avery	do	0.848	Deficient in ethereal oil; inferior.
9232	20	J. A. Miller & Co.	do	0.818	Deficient in ethereal oil; inferior.
9233	20	G. A. Cole	do	0.839	Deficient in ethereal oil; inferior.
9234	22	A. J. Fellows	Chatham	0.798	Good.
9235	22	Washburn & Seymour	do	0.805	do
9236	22	C. S. Hanks	Hudson	0.803	do
9237	22	Van Tassel & Tobey	do	0.818	do
9238	22	J. M. Johnson	do	0.839	do
9239	22	Rice Bros	do	0.819	Deficient in ethereal oil; inferior.
9240	22	Bryon Stedman	do	0.852	Deficient in ethereal oil; inferior.
9241	22	Wardle & Son	do	0.798	Deficient in ethereal oil; inferior.
9242	22	Roy Webber	Schenectady	0.804	Good.
9243	22	H. S. Moore	do	0.805	do

9244		22	Van Zandt & Rector	do	0.801	do
9245		22	G. E. Duryee	do	0.826	Fair.
9246		22	Wm. Sauter	do	0.810	Good.
9247		22	J. T. Lyon	do	0.779	do
9248		22	A. T. Veeder & Son	do	0.807	do
9249		22	G. Steinfuhrer	do	0.804	Deficient in ethereal oil; inferior.
9250		22	C. H. Horstmann	do	0.845	Deficient in ethereal oil; inferior.
9251		22	H. A. Kerste	do	0.803	Good.
	1895.					
9926	March	25	Jewell's Pharmacy	Batavia	0.799	do
9927		25	W. S. & J. J. Patterson	do	0.798	do
9928		25	Cooley & Gould	do	0.834	Deficient in ethereal oil; inferior.
9929		25	J. M. Walkinshaw	do	0.805	Deficient in ethereal oil; inferior.
9930		25	John Harper	Dunkirk	0.807	Deficient in ethereal oil; inferior.
9931		25	E. M. Davis	do	0.802	Good.
9932		25	Monroe's Pharmacy	do	0.802	do
9933		25	Van Scoter & West	do	0.798	Deficient in ethereal oil; inferior.
9934		25	F. K. Lyon	do	0.808	Fair.
9935		25	F. H. Edmunds	Fredonia	0.854	Deficient in ethereal oil; inferior.
9936		25	F. C. F. Sievert	do	0.799	Deficient in ethereal oil; inferior.
9937		25	Chatsey & Clothier	do	0.888	Deficient in ethereal oil; inferior.
9938		26	J. R. Tanner	Buffalo	0.840	Deficient in ethereal oil; inferior.
9939		26	M. Willoughby, M. D	do	0.836	Deficient in ethereal oil; inferior.
9940		26	W. S. O'Brien	do	0.809	Deficient in ethereal oil; inferior.
9941		26	C. N. Riggs	do	0.834	Deficient in ethereal oil; inferior.

Compound Spirit of Ether, U. S. P. — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity at 59 degrees Fahrenheit.	Quality.
	1895.				
9942	March 26	Denny & Field	Buffalo	0.800	Deficient in ethereal oil; inferior.
9943	26	Elwood & Thompson	do	0.807	Fair.
9944	26	J. P. & J. W. Diehl	do	0.802	Deficient in ethereal oil; inferior.
9945	26	W. G. Gregory	do	0.836	Deficient in ethereal oil; inferior.
9946	26	W. C. Dambach	do	0.805	Fair.
9947	26	Geo. E. Sykes	do	0.801	Deficient in ethereal oil; inferior.
9948	26	F. J. Wiltse	do	0.837	Deficient in ethereal oil; inferior.
9949	26	Blackney & Co	do	0.800	Good.
9950	26	C. Rodenbach	do	0.802	do
9951	26	Thomas' Drug Store	do	0.800	Deficient in ethereal oil; inferior.
9952	26	Smither & Thurstone	do	0.801	Deficient in ethereal oil; inferior.
9953	26	Rider's Drug Store	do	0.811	Fair.
9954	26	W. A. Kendall	do	0.794	Deficient in ethereal oil; inferior.
9955	26	Geo. A. Lawrence	do	0.844	Deficient in ethereal oil; inferior.
9956	26	R. W. Grills	do	0.804	Fair.
9957	26	Jeffrey & Golshall	do	0.798	Good.
9958	26	Lyman & Sloan	do	0.834	Deficient in ethereal oil; inferior.

		.....	do	.....	inferior.
9960	27	Howard Wade.....	do	0.838	Deficient in ethereal oil; inferior.
9961	27	P. S. McArthur.....	do	0.800	Fair.
9962	27	A. B. Hoolihaut & Co.....	do	0.849	Deficient in ethereal oil; inferior.
9963	27	Bushnell's Pharmacy.....	do	0.849	Deficient in ethereal oil; inferior.

Fowler's Solution. (*Liquor Potassii Arsenitis, U. S. P.*)

Six samples examined of which five were of good and one was of fair quality as follows:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Grams of arsenous acid in 100 cc.	Quality.
	1894.				
9392	December 20	C. E. Purington & Co	Johnstown	0.93	Good.
9393	20	J. F. Cahill	do	0.92	do
9394	20	Sutliff & Livingston	do	0.80	Fair.
9395	20	W. B. Van Vliet	do	0.96	Good.
9396	20	D. H. Van Hensen	do	0.96	do
9397	20	Houck & Patrick	Gloversville	0.98	do

[illegible] ; from 0.61 to 1.25, good; and over 1.25 excessive strength. Of the 36 samples examined there were of good quality, 30; fair, 2; inferior, 2, and of excessive strength, 2. The samples varied in strength from 0.06 to 1.89 per cent. Particulars concerning these samples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1895.				
9852	March 25	Jewell's Pharmacy	Batavia	1.24	Good
9853	25	W. S. & J. J. Patterson	do	1.24	do
9854	25	Cooley & Gould	do	1.02	do
9855	25	J. M. Walkinshaw	do	1.13	do
9856	25	John Harper	Dunkirk	0.87	do
9857	25	E. M. Davis	do	0.90	do
9858	25	Monroe's Pharmacy	do	0.86	do
9859	25	Van Scotes & West	do	0.06	Inferior
9860	25	F. K. Lyon	do	1.13	Good.
9861	25	F. H. Edmunds	Fredonia	1.00	do
9862	25	F. C. F. Sievert	do	1.08	do
9863	25	Chatsey & Clothier	do	1.01	do
9864	26	M. Willoughby, M. D	Buffalo	1.10	do
9865	26	W. S. O'Brien	do	1 14	do
9866	26	C. N. Riggs	do	1.14	do
9867	26	Denny & Field	do	1.89	Excessive strength.
9868	26	Elwood & Thompson	do	0.72	Fair.
9869	26	J. P. & J. W. Diehl	do	1.07	Good.
9870	26	W. S. Gregory	do	1.17	do
9871	25	Gee. E. Sykes	do	0.63	Inferior.
9872	26	F. J. Wiltse	do	1.10	Good.
9873	26	Blackney & Co	do	1.15	do
9874	26	C. Rodenbach	do	1.15	do

Syrup of Hydriodic Acid — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1895.				
9875	March 26	Thomas' Drug Store	Buffalo	1.10	Good.
9876	26	Smither & Thornton	do	1.10	do
9877	26	Rider's Drug Store	do	1.14	do
9878	26	W. A. Kendall	do	1.10	do
9879	26	Kingston's Pharmacy	do	1.75	Excessive strength.
9880	26	R. W. Grills	do	0.65	Fair.
9881	26	Jeffrey & Gotshall	do	1.11	Good.
9882	26	Lyman & Sloan	do	1.19	do
9883	26	Stoddart Bros	do	1.19	do
9884	27	Howard Wade	do	1.10	do
9885	27	P. S. McArthur	do	1.06	do
9886	27	A. B. Hoolihan & Co	do	0.96	do
9887	27	Bushnell's Pharmacy	do	1.10	do

Diluted Hydrobromic Acid. (*Acidum Hydrobromicum Dilutum, U. S. P.*)

Two samples examined, of which one was of good quality and the other of excessive strength. The pharmacopœia requires 10 per cent. of the absolute acid and the same for diluted hydrochloric, nitric, phosphoric and sulphuric acids. In rating these acids those containing from 9 to 12.5 per cent. have been classed as good; 7.5 to 8.9, fair; below 7.5, inferior, and over 12.5 excessive strength. These samples varied from 10.4 to 14.8 per cent. Particulars concerning the samples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1895.				
9671	March 9	Spotten's Pharmacy	Troy	10.4	Good.
9672	9	D. F. Magill	do	14.8	Excessive strength.

Diluted Hydrochloric Acid. (*Acidum Hydrochloricum Dilutum, U. S. P.*)

Sixteen samples examined, of which there were of good quality, 13, and fair, 3. The pharmacopœia requires 10 per cent. of the absolute acid, and in rating them the same standards have been employed as for diluted hydrobromic acid, which see. The samples varied from 7.5 to 12.5 per cent. Particulars concerning them are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1895.				
10323	March 29	E. J. Liebetrut	Buffalo	10.1	Good.
10324	29	E. G. Boysen	do	10.6	do
10325	29	H. V. Roese	do	10.6	do
10326	29	Geo. Reiman	do	9.4	do
10327	29	Theo V. Bauer	do	10.6	do
10328	29	Geo. Schaefer	do	12.5	do
10329	29	W. P. Jeseph	do	8.4	Fair.
10330	29	C. J. Dwyer	do	10.0	Good.
10331	29	Retel's Pharmacy	do	9.1	do
10332	29	Chas. A. Drefs	do	9.6	do
10333	29	W. H. Borget	do	10.6	do
10334	29	M. J. Frisch	do	9.5	do
10335	29	Oscar Rydstrom	do	10.2	do
10336	29	Louis Weinmar	do	8.3	Fair.
10337	29	Herman Frost	do	7.5	do
10338	29	J. F. Krug	do	9.6	Good.

of Hydrogen Dioxide. (*Aqua Hydrogenii Dioxidi, U. S. P.*)

one samples examined.— This preparation, at the present ite largely used in medicine, was added to the pharmaco- its last revision. It is defined therein as "a slightly acid, solution of hydrogen dioxide, containing, when freshly d, about three per cent., by weight, of the pure dioxide, nding to about 10 volumes of available oxygen." Samples from 8.5 to 13 volumes of available oxygen have been good; from 7 to 8.4 as fair; under 7 as inferior, and over excessive strength. Of the 51 samples examined there good quality, 39; fair, 2; inferior, 6; and of excessive 4. The samples varied in available oxygen from 0.76 to uivalent to 0.23 and 4.64 per cent., respectively of absolute n dioxide. Particulars concerning the samples are d.

Solution of Hydrogen Dioxide, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute hydrogen dioxide.	Volumes of available oxygen.	Quality.
	1895.					
9607	March 9	Drake & Moffit	Troy	2.92	9.63	Good.
9608	9	Spotten's Pharmacy	do	2.70	8.91	do
9609	9	J. M. Donnelly	do	3.25	10.72	do
9610	9	D. F. Magill	do	3.12	10.29	do
9611	9	W. H. Wilkinson	do	2.95	9.73	do
9679	21	Frank M. Clute	Cohoes	2.81	9.29	do
9680	21	James S. Calkins	do	2.84	9.37	do
9681	21	P. H. Spillane	do	3.39	11.18	do
9682	21	M. McDermott	do	3.10	10.23	do
9683	21	Archibold Bros	do	3.09	10.19	do
9684	21	L. A. Bellegarde	do	3.08	10.16	do
9685	21	Thomas T. Kennedy	do	2.80	9.24	do
9686	21	John E. Grady	Green Island	4.64	15.31	Excessive strength
9742	25	Jewell's Pharmacy	Batavia	3.17	10.46	Good.
9743	25	W. S. & J. J. Patterson	do	4.15	13.69	Excessive strength.
9744	25	Cooley & Gould	do	3.52	11.61	Good.
9745	25	J. M. Walkinshaw	do	0.23	0.76	Inferior.
9746	25	John Harper	Dunkirk	3.00	9.90	Good.
9747	25	E. M. Davis	do	3.21	10.59	do
9748	25	Monroe's Pharmacy	do	3.23	10.65	do
9749	25	Van Scotes & West	do	1.35	4.45	Inferior.
9750	25	F. K. Lyon	do	3.01	9.93	Good.
9751	25	F. H. Edmunds	redonia	2.73	9.00	do
9752	25	F. C. F. Sievert	do	2.34	7.72	Fair.
9753	25	Chatean & Clothier	do	3.00	9.90	Good.

9758		26	*Denny & Field*	do		2.82	9.30	do
9759		26	Elwood & Thompson	do		3.09	10.19	do
9760		26	J. P. & J. W. Diehl	do		2.83	9.33	do
9761		26	W. S. Gregory	do		4.05	13.36	Excessive strength.
9762		26	W. C. Dambach	do		3.05	10.06	Good.
9763		26	Geo. E. Sykes	do		2.83	9.33	do
9764		26	F. J. Wiltse	do		3.21	10.59	do
9765		26	Blackney & Co	do		3.22	10.62	do
9766		26	C. Rodenbach	do		2.96	9.76	do
9767		26	Thomas' Drug Store	do		2.11	6.96	Inferior.
9768		26	Smither & Thurstone	do		2.84	9.37	Good.
9769		26	Rider's Drug Store	do		3.87	12.77	do
9770		26	W. A. Kendall	do		3.09	10.19	do
9771		26	Kingston's Pharmacy	do		2.57	8.48	Fair.
9772		26	R. W. Grills	do		2.73	9.00	Good.
9773		26	Jeffrey & Gatshall	do		4.27	14.09	Excessive strength.
9774		26	Lyman & Sloan	do		1.85	6.10	Inferior.
9775		26	Stoddart Bros	do		0.90	2.97	do
9776		27	Howard Wade	do		2.82	9.30	Good.
9777		27	P. S. McArthur	do		2.86	9.43	do
9778		27	A. B. Hoolihan & Co	do		3.03	9.99	do
9779		27	Bushnell's Pharmacy	do		2.74	9.04	do

Compound Solution of Iodine. (*Liquor Iodi Compositus, U. S. P.*)

This preparation, known as "Lugol's Solution," should contain 5 per cent. of iodine, brought into solution in water by aid of iodide of potassium. Thirty samples were examined, of which there were of good quality, 21; fair, 4; inferior, 4; and of excessive strength, 1. The samples varied in percentage of iodine from 0.46 to 8.1. Samples containing from 4 to 7 per cent. rated as good, above 7 per cent., excessive strength; from 3 to 4 per cent., fair, and below 3 per cent., inferior. Particulars concerning the samples examined are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of iodine.	Quality.
	1894.				
9285	December 20	J. H. Cahill	Johnstown	0.46	Inferior.
9286	20	Sutliff & Livingston	do	4.9	Good.
9287	20	W. B. Van Vliet	do	4.6	do
9288	20	Estate of J. B. Stone	Gloversville	4.9	do
9289	20	J. T. Avery	do	4.5	do
9290	20	J. A. Miller & Co	do	2.4	Inferior.
9291	20	J. A. Van Auken	do	6.1	Good.
9292	22	H. J. Baringer, Jr.	Chatham.	5.1	do
9293	22	A. McKinstry & Son	Hudson	4.3	do
9294	22	J. M. Johnson	do	3.3	Fair.
9295	22	Rice Bros	do	3.8	do
9296	22	H. S. Moore	Schenectady	4.6	Good.
9297	22	Van Zandt & Rector	do	2.6	Inferior.
9298	22	William Sauter	do	4.1	Good.
9299	22	J. T. Lyon	do	3.3	Fair.
9300	22	A. T. Veeder & Son	do	4.2	Good.
9301	22	G. Steinfuhrer	do	5.0	do
9302	22	H. A. Kerste	do	4.4	do
	1895.				
9517	March 5	A. M. Knowlson	Troy	8.1	Excessive strength.
9518	5	C. H. Wiberly	do	5.9	Good.

9519	5	E. W. Stoddard					
9520	5	L. Barton & Co.	do				
9521	5	F. M. Brower & Co.	do			4.9	Good.
9522	5	George W. Holcomb	do			3.7	Fair.
9523	5	John J. Healy	do			4.6	Good.
9524	5	H. J. Eagle	do			4.8	do
9525	5	Robert Glass	do			4.9	do
9526	5	Daniel A. Healy	do			6.0	do
9527	5	H. Gnadendorff	do			5.1	do
9618	9	Spotten's Pharmacy	do			5.0	do
						4.3	do

Tincture of Iodine. (*Tinctura Iodi, U. S. P.*)

Seventy-one samples examined. The formula for the prep of this important article was changed in the last revision pharmacopoeia, but its strength remains not very differe formerly contained 8 per cent. of iodine and now contain grams in 100 cubic centimeters of alcohol. Of the 71 samp amined there were of good quality, 17; fair, 27; inferior, 23, excessive strength, 2. Of the remaining two, one consisted o less tincture of iodine, and the other of compound solu iodine Samples containing from six to nine grams of iodin cubic centimeters have been rated as of good quality; from fair quality; under 5, inferior quality; and over 9, ex strength. The samples examined varied from 1.00 to 12.8 gr iodine in 100 cubic centimeters. Particulars concerning th ples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Grams of Iodine in 100 cc.	Quality.
	1895.				
9498	March 4	J. H. Miller	Greenbush	5.2	Fair.
9499	4	Daniel Donnelly	East Albany	6.7	Good.
9500	4	J. F. Munger	do	6.6	do
9501	4	A. O. Roberts, M. D	Bath-on-Hudson	1.6	Inferior.
9502	4	J. H. Conine	do	6.3	Good.
9503	5	A. M. Knowlson	Troy	4.5	Inferior.
9504	5	C. H. Wiberly	do	5.2	Fair.
9505	5	E. W. Stoddard	do	5.7	do
9506	5	Moncrief & Francis	do	2.7	Inferior.
9507	5	L. Burton & Co	do	12.8	Excessive strength.
9508	5	F. M. Brower & Co	do	5.0	Fair.
9509	5	Geo. W. Holcomb	do	4.7	Inferior.
9510	5	John J. Healy	do	3.6	do
9511	5	H. J. Eagle	do	4.2	do
9512	5	Robert Glass	do	6.5	Good.
9513	5	Daniel A. Healy	do	4.0	Inferior.
9514	5	B. H. Gertzen	do	6.5	Good.
9515	5	C. Herzog	do	4.5	Inferior.
9516	5	H. Gundendorff	do	6.2	Good.
9616	9	Drake & Moffit	do	7.0	do
9617	9	W. H. Wilkinson	do	6.5	do
9687	21	Frank M Clute	Cohoes	6 6	do
9688	21	Daniel S. Dodge	do	5.0	Fair.
9689	21	Jas. S. Calkins	do	5.6	do
9690	21	Wm. Brown	do	2.5	Inferior.
9691	21	M. McDermott	do	7.9	Good.
9692	21	Archibold Bros	do	4.1	Inferior.
9693	21	L. A. Belgrade	do	3.9	do
9694	21	D. Hermans	do	2.2	do

Tincture of Iodine, U. S. P.—(*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Grams of Iodine in 100 cc.	Quality.
	1895.				
9995	March 21	Thos. T. Kennedy	Cohoes	2.8	Inferior.
9996	21	John E. Grady	Green Island	5.4	Fair.
9996	27	R. K. Smither	Buffalo	4.9	Inferior.
9997	27	J. C. Landsheft	do	5.2	Fair.
9998	27	Noble & Drake	do	10.8	Excessive strength.
9999	27	C. W. Armstrong	do	4.6	Inferior.
10000	27	Wm. D. Rose	do	5.4	Fair.
10001	27	Hubbard & Co	do	9.0	Good.
10002	27	H. C. Cleveland	do	5.8	Fair.
10003	27	C. W. Tuerke	do	5.2	do
10004	27	E. H. Beaman	do	4.6	Inferior.
10005	27	P. M. Lockie	do	5.3	Fair.
10006	27	Geo. W. Sayles	do	5.6	do
10007	27	Robert E. Jones	do	6.0	Good.
10008	27	R. S. Fowler	do	.....	Consists of colorless tincture of iodine; error in sale.
10009	27	W. H. Chase	do	3.4	Inferior.
10010	27	J. S. Greey	do	5.6	Fair.
10011	27	J. H. Kantz	do	4.3	Inferior.
10012	27	W. H. J. Smith	do	5.0	Fair.
10013	27	Vaughn's Pharmacy	do	5.1	do
10014	27	Neil McEachren	do	6.7	Good.
10015	28	Warren E. Wolfe	do	5.2	Fair.
10016	28	H. J. Dimond	do	6 6	Good.

10021	28	J. W. Menzies	do		5.3	Fair.
10022	28	Wm. Coulson Drug Co	do		1.0	Inferior.
10023	28	W. H. Smith	do		5.6	Fair.
10024	28	F. M. Dunning	do		5.7	do
10025	28	M. Van Every	do		4.8	Inferior.
10026	28	E. L. A. Schwabe	do		.....	Consists of compound solution of iodine; error in sale.
10027	28	J. E. Smith	do		4.1	Inferior.
10028	28	A. J. Lies	do		3.9	do
10029	28	A. J. Werner	do		5.7	Fair.
10030	28	Geo. Reiman	do		5.6	do
10031	28	J. L. Perkins & Co	do		5.8	do
10032	28	J. M. Horton	do		5.9	do
10033	28	Gibbs & Felch	do		5.6	do
10034	28	C. F. Wohrle	do		7.1	Good.
10035	28	F. L. Anderson	do		5.5	Fair.

Reduced Iron. (*Ferrum Reductum, U. S. P.*)

Sixty-nine samples examined, of which but three were of good quality; two fair; sixty-two inferior, and one consisted of tincture of ferric chloride, and the other of the so-called "sub-carbonate," the latter samples having been sold by mistake for reduced iron.

This preparation is seldom or never found in our stores of the quality required by the pharmacopoeia. A well-known firm of manufacturers quote in their list three grades; one, said to contain 80 per cent., and entitled "U. S. P."; another, 65 per cent., and a third, designated as "black," 50 per cent. The real article should have a grayish-black color, but pharmacists assure me that many physicians prefer it black, and that such a preparation has to be supplied. If such articles are to be sold physicians should clearly understand their nature. Such sales are, however, in my opinion, entirely unjustifiable. Pharmacists can not, with propriety, urge that such "black irons" are sold, not as U. S. P., but as "Quevenne's iron," or by some other trade name, for since the pharmacopoeia defines the quality and sets a standard, the article should conform to this standard. In rating these samples, I have not been unmindful of the fact that it is difficult to manufacture and preserve reduced iron conforming to the pharmacopoeial requirements, and have classed as good, those samples yielding 70 per cent., or upwards of metallic iron, and as fair, those yielding 60 to 70 per cent., so that only those falling below 60 per cent., have been reported as inferior. Reduced iron is chiefly manufactured in Germany, and generally is made, as I am informed, by igniting the oxalate and not by reducing the oxide in hydrogen. This process leaves a certain amount of finely divided carbon in the product, imparting to it a black color. Whether in addition to this, carbon in any form is intentionally added to the preparation, I am unable to state. In this case pharmacists are not so much to blame as are the manufacturers, and yet they are legally responsible for the quality of the article they dispense.

Reduced Iron, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of metallic iron.	Quality.
	1894.				
9398	December 20	J. F. Cahill	Johnstown	28.0	Inferior.
9399	20	Sutliff & Livingston	do	37.0	do
9400	20	W. B. Van Vliet	do	48.0	do
9401	20	Estate of J. B. Stone	Gloversville	37.5	do
9402	20	J. T. Avery	do	20.0	do
9403	20	J. A. Miller & Co	do	39.0	do
9404	20	G. A. Cole	do	23.0	do
9405	22	A. J. Fellows	Chatham	31.0	do
9406	22	H. J. Baringer, Jr	do	28.0	do
9407	22	Washburn & Seymour	do	31.5	do
	1895.				
9542	March 4	James H. Miller	Greenbush	Deficient.	do
9543	4	Daniel Donnelly	East Albany	do	do
9544	4	J. H. Conine	Bath-on-Hudson	.....	Consists of tincture of ferric chloride; error in sale.
9545	5	A. M. Knowlson	Troy	Deficient.	Inferior.
9546	5	C. H. Wiberly	do	do	do
9547	5	E. W. Stoddard	do	do	do
9548	5	L. Burton & Co	do	do	do
9549	5	F. M. Brower & Co	do	do	do
9550	5	G. W. Holcomb	do	do	do
9551	5	John J. Healy	do	Deficient.	do
9552	5	H. J. Eagle	do	30.0	do
9553	5	Dan'l A. Healy	do	31.0	do
9554	5	B. H. Gertzen	do	80.0	Good.
9555	5	C. Herzog	do	45.0	Inferior.
9556	5	H. Guadendorff	do	31.0	do
9612	9	Drake & Moffit	do	Deficient.	do

Reduced Iron U. S. P.— (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of metallic iron.	Quality.
	1895.				
9613	March 9	Spotten's Pharmacy	Troy	Deficient.	Inferior.
9614	9	J. M. Donnelly	do	68.0	Fair.
9615	9	D. F. Magill	do	Deficient.	Inferior.
9697	21	James S. Calkins	Cohoes	31.0	do
9698	21	Wm. Brown	do	20.0	do
9699	21	P. H. Spillane	do	23.0	do
9700	21	L. A. Bellegarde	do	45.0	do
9701	21	John E. Grady	Green Island	48.0	do
9780	25	Jewell's Pharmacy	Batavia	31.0	do
9781	26	U. S. & J. J. Patterson	do	38.0	do
9782	25	Cooley & Gould	do	19.0	do
9783	25	J. M. Walkinshaw	do	35.0	do
9784	25	John Harper	Dunkirk	51.0	Inferior.
9785	25	Monroe's Pharmacy	do	66.0	Fair.
9786	25	Van Scoter & West	do	25.0	Inferior.
9787	25	F. K. Lyon	do	36.0	do
9788	25	F. H. Edmunds	Fredonia	32.0	do
9789	25	F. C. F. Sievert	do	....	Consists of so-called "subcarbonate of iron;" error in sale.
9790	25	Chatsey & Clothier	do	18.0	Inferior.
9791	26	M. Willoughby, M. D.	Buffalo	46.0	do
9792	26	W. S. O'Brien	do	40.0	do
9793	26	C. N. Riggs	do	38.0	do
9794	26	Denny & Field	do	44.0	do
9795	26	Elwood & Thompson	do	37.0	do

9799	26	Geo. E. Sykes	do	43.0	do
9800	26	F. J. Wiltse	do	31.0	do
9801	26	Blackney & Co	do	16.0	do
9802	26	C. Rodenbach	do	45.0	do
9803	26	Thomas' Drug Store	do	26.0	do
9804	26	Smither & Thurstone	do	39.0	do
9805	26	Rider's Drug Store	do	28.0	do
9806	26	Geo. A. Lawrence	do	34.0	do
9807	26	R. W. Grills	do	35.0	do
9808	26	Jeffrey & Gotshall	do	22.0	do
9809	26	Lyman & Sloan	do	34.0	do
9810	26	Stoddart Bros	do	38.0	do
9811	27	Howard Wade	do	71.0	Good.
9812	27	P. S. McArthur	do	49.0	Inferior.
9813	27	A. B. Hoolihan & Co	do	80.0	Good.
9814	27	Bushnell's Pharmacy	do	32.0	Inferior.

Diluted Phosphoric Acid. (*Acidum Phosphoricum Dilutum, U. S. P.*)

This preparation should contain 10 per cent. by weight of absolute orthophosphoric acid. In rating these samples the same standards have been employed as for diluted hydrobromic acid, which see. One hundred and four samples were examined, of which there were of good quality, 89; fair, 2; inferior, 5; and excessive strength, 8. The samples varied in strength from 4.40 to 21.70 per cent. Particulars concerning the samples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1894.				
9360	December 20	J. F. Cahill	Johnstown	9.4	Good.
9361	20	Sutliff & Livingston	do	15.0	Excessive strength.
9362	20	W. B. Van Vliet	do	12.5	Good.
9363	20	D. H. Van Heusen	do	10.6	do
9364	20	Houck & Patrick	Gloversville	9.1	do
9365	20	Estate of J. B. Stone	do	9.1	do
9366	20	J. T. Avery	do	7.0	do
9367	20	G. Rowe	do	13.0	do
9368	20	J. A. Miller & Co	do	9.5	do
9369	20	G. A. Cole	do	10.8	do
9370	22	A. J. Fellows	Chatham	11.2	do
9371	22	H. J. Baringer, Jr.	do	9.5	do
9372	22	Washburn & Seymour	do	10.7	do
9373	22	C. S. Hanks	Hudson	14.6	Excessive strength.
9374	22	A. McKinstry & Son	do	9.5	Good.
9375	22	Van Tassel & Tobey	do	7.6	Fair.
9376	22	J. M. Johnson	do	4.7	Inferior.
9377	22	Rice Bros	do	10.7	Good.
9378	22	R. Stedman	do	10.6	do

9383		22	G. E. Duryee		11.4	Good.
9384		22	Wm. Sauter	do	9.6	do
9385		22	J. T. Lyon	do	21.7	Excessive strength.
9386		22	E. Ross	do	11.5	Good.
9387		22	A. T. Veeder & Son	do	13.8	Excessive strength.
9388		22	G. Steinfuhrer	do	5.1	Inferior.
9389		22	C. H. Horstmann	do	10.3	Good.
9390		22	H. A. Kerste	do	10.2	do
9391		22	H. B. Duryee	do	13.4	do
	1895.					
9569	March	4	J. H. Miller	Greenbush	16.6	Excessive strength.
9570		4	Daniel Donnelly	East Albany	11.3	Good.
9571		4	John F. Munger	do	10.7	do
9572		4	A. O. Roberts, M. D	Bath-on-Hudson	12.5	do
9573		4	J. H. Conine	do	11.3	do
9574		5	A. M. Knowlson	Troy	16.8	Excessive strength.
9575		5	C. H. Wiberly	do	6.4	Inferior.
9576		5	E. W. Stoddard	do	10.3	Good.
9577		5	Moncrief & Francis	do	9.4	do
9578		5	L. Burton & Co	do	10.3	do
9579		5	F. M. Brower & Co	do	10.9	do
9580		5	G. W. Holcomb	do	12.5	do
9581		5	John J. Healy	do	11.6	do
9582		5	H. J. Eagle	do	12.5	do
9583		5	Robert Glass	do	9.9	do
9584		5	Daniel A. Healy	do	11.2	do
9585		5	B. H. Gertzen	do	12.5	do
9586		5	C. Herzog	do	10.6	do
9587		5	H. Guadendorff	do	10.6	do
9674		9	Drake & Moffit	do	11.7	do
9675		9	Spotten's Pharmacy	do	10.6	do
9676		9	J. M. Donnelly	do	11.7	do
9677		9	D. F. Magill	do	12.2	do
9678		9	W. H. Wilkinson	do	10.3	do
9721		21	Frank M. Clute	Cohoes	11.7	do
9722		21	Jas. S. Calkins	do	11.3	do
9723		21	Wm. Brown	do	11.0	do
9724		21	P. H. Spillane	do	11.9	do
9725		21	M. McDermott	do	10.4	do

Diluted Phosphoric Acid — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1895.				
9726	March 21	Archibold Bros.	Cohoes	10.6	Good.
9727	21	Thos. T. Kennedy	do	10.1	do
9728	21	John E. Grady	Green Island	10.9	do
10228	27	R. K. Smither	Buffalo	9.9	do
10229	27	J. C. Landsheft	do	12.5	do
10230	27	Noble & Drake	do	9.9	do
10231	27	C. W. Armstrong	do	11.8	do
10232	27	Wm. D. Rose	do	10.3	do
10233	27	Hubbard & Co.	do	12.5	do
10234	27	H. C. Cleveland	do	11.2	do
10235	27	C. W. Yuerke	do	16.8	Excessive strength.
10236	27	E. H. Beaman	do	10.4	Good.
10237	27	P. M. Lockie	do	11.1	do
10238	27	Geo. W. Sayles	do	12.3	do
10239	27	Robert E. Jones	do	11.8	do
10240	27	R. S. Fowler	do	11.0	do
10241	27	W. H. Chase	do	12.2	do
10242	27	J. S. Greey	do	9.9	do
10243	27	J. H. Kautz	do	11.0	do
10244	27	W. H. J. Smith	do	11.2	do
10245	27	Vaughn's Pharmacy	do	9.7	do
10246	27	Neil McEachren	do	11.6	do
10247	28	Warren E. Wolfe	do	12.2	do
10248	28	H. J. Dimond	do	11.4	do
[illegible]	[illegible]	[illegible]	do	11.0	do

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10256	28	F. M. Dunning	do		10.1	do
10257	28	M. Van Every	do		11.6	do
10258	28	E. L. A. Schwabe	do		4.4	Inferior.
10259	28	J. E. Smith	do		10.4	Good.
10260	28	A. J. Lies	do		11.7	do
10261	28	A. J. Werner	do		11.3	do
10262	28	Geo. Reiman	do		10.3	do
10263	28	J. L. Perkins & Co	do		8.8	Fair.
10264	28	J. M. Horton	do		12.0	Good.
10265	28	Gibbs & Felch	do		9.0	do
10266	28	C. F. Wohrle	do		12.5	do
10267	28	F. L. Anderson	do		11.8	do
					11.6	do

Potassium Bitartrate. (*Potassii Bitartras, U. S. P.*) "*Cream of Tartar.*"

This familiar household article and medicinal agent is generally, as sold in grocery stores, either entirely fictitious or largely adulterated. In 1891, 153 samples, purchased from retail grocers, were examined, and of these samples but 55, or 28 per cent. of the total, were found to consist of real and unadulterated cream of tartar. In the report for that year it was stated that previous investigations had shown that "a pure article is almost invariably sold by druggists." The results now reported confirm this statement, for of 49 samples examined all were of excellent quality, containing upwards of 99 per cent. of real bitartrate, except one, which was adulterated with foreign matter. Similar results were obtained last year when but two adulterated samples were reported out of a total of 38. Particulars concerning the samples are appended:

Number of sample.	Date or collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9639	March 9	Henry Schneider	Troy	Good.
9640	9	Cavanaugh & Perkins	do	do
9641	9	Geo. T. Butler & Co	do	do
9642	9	Paulus' Pharmacy	do	do
9643	9	Wm. H. Flandrau	do	do
9644	9	W. L. Schneider	do	do
9645	9	G. E. Stillman & Co	do	do
9646	9	H. S. Swart	do	do
9647	9	Jacob Eagle	do	do
9648	9	J. T. O'Sullivan	do	Contained large amount of calcium salt; inferior.
10074	27	R. K. Smither	Buffalo	Good.
10075	27	J. C. Landsbeft	do	do
10076	27	Noble & Drake	do	do
10077	27	C. W. Armstrong	do	do
10078	27	Wm. D. Rose	do	do
10079	27	Hubbard & Co	do	do
10080	27	H. C. Cleveland	do	do
10081	27	C. W. Tuerke	do	do

10082	27	E. H. Beaman	do		do
10083	27	P. M. Lockie	do		do
10084	27	Geo. W. Sayles	do		do
10085	27	Robert E. Jones	do		do
10086	27	R. S. Fowler	do		do
10087	27	W. H. Chase	do		do
10088	27	J. S. Greey	do		do
10089	27	J. H. Krantz	do		do
10090	27	W. H. J. Smith	do		do
10091	27	Vaughn's Pharmacy	do		do
10092	28	Warren E. Wolfe	do		do
10093	28	H. J. Dimond	do		do
10094	28	J. W. Hodson	do		do
10095	28	R. H. Maltbie	do		do
10096	28	G. O. Baxter	do		do
10097	28	E. N. Bargar	do		do
10098	28	J. W. Menzies	do		do
10099	28	Wm. Coulson Drug Co	do		do
10100	28	Smith's Drug Store	do		do
10101	28	F. M. Dunning	do		do
10102	28	M. Van Every	do		do
10103	28	E. L. A. Schwabe	do		do
10104	28	J. E. Smith	do		do
10105	28	A. J. Lies	do		do
10106	28	A. J. Werner	do		do
10107	28	Geo. Reiman	do		do
10108	28	J. L. Perkins & Co	do		do
10109	28	J. M. Horton	do		do
10110	28	Gibbs & Felch	do		do
10111	28	C. F. Wohrle	do		do
10112	28	F. L. Anderson	do		do

Potassium Bromide. (*Potassii Bromidum, U. S. P.*)

Twenty-one samples examined, of which 11 were of good quality; 3 of fair quality, and 7 inferior, containing too much of the carbonate, bromate or iodide, or possessing too great an alkalinity. A list of the samples is appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9624	March 9	Geo. T. Butler & Co	Troy	Contains sulphate; inferior.
9625	9	Paulus' Pharmacy	do	do do
9626	9	Wm. H. Flandrau	do	Good.
9627	9	G. E. Stillman & Co	do	Contains sulphate and carbonate; inferior.
9628	9	J. T. O'Sullivan	do	Contains sulphate; inferior.
10268	29	E. J. Liebetrut	Buffalo	Good.
10269	29	E. G. Boysen	do	do
10270	29	H. V. Roese	do	Contains excess of carbonate; fair.
10271	29	Geo. Reiman	do	Good.
10272	29	Theo. V. Bauer	do	do
10273	29	Geo. Schaefer	do	Contains sulphate and carbonate; inferior.
10274	29	W. P. Jeseph	do	Good.
10275	29	C. J. Dwyer	do	Contains sulphate and carbonate; inferior.
10276	29	Retel's Pharmacy	do	Contains excess of carbonate; fair.
10277	29	Chas. A. Drefs	do	Good.
10278	29	W. H. Borget	do	do
10279	29	M. J. Frisch	do	do
10280	29	Oscar Rydstrom	do	do
10281	29	Louis Weinmar	do	Contains sulphate and carbonate; inferior.
[illegible]	29	Herman Frost	do	Good.

Saffron. (*Crocus, U. S. P.*)

Forty-nine samples examined, of which 22 were of good quality, while 25 were "safflower" (*Carthamus tinctorius*), and two samples consisted of an oxide of iron known in trade as "Crocus martis," and used as a polishing powder, but having no medicinal value. Concerning the sale of safflower for crocus, I quote from a previous report: "The saffron of the Pharmacopœia consists of the stigmas of *Crocus sativus*, and is often known in the trade as Spanish saffron, or true saffron. No other kind of saffron is recognized in the Pharmacopœia, and when it is called for by its official name, no other article should be substituted for it. Safflower is very cheap, and is often called for verbally as a domestic remedy, under the name of saffron; but when the demand is for the pharmacopœial drug, it should not be dispensed. At all events, if offered in its stead, the substitution should be explained; but no such explanation was made in any of the above cases." A description of the samples is appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1894.			
9428	December 20	C. E. Purington & Co	Johnstown	Consists of safflower; error in sale.
9429	20	J. F. Cahill	do	do do
9430	20	W. B. Van Vliet	do	Good.
9431	20	Estate of J. B. Stone	Gloversville	do
9432	20	J. T. Avery	do	Consists of safflower; error in sale.
9433	20	G. Rowe	do	do do
9434	20	J. A. Miller & Co	do	Good.
9435	20	J. A. Van Auksen	do	Consists of safflower; error in sale.
9436	22	Van Tassel & Tobey	Hudson	Good.
9437	22	Wardle & Son	do	do
9438	22	Wm. Sauter	Schenectady	do
9439	22	J. T. Lyon	do	do
9440	22	A. T. Veeder & Son	do	do
9441	22	G. Steinfuhrer	do	Consists of safflower; error in sale.
9442	22	H. A. Kerste	do	Good.

Saffron, U. S. P.—(*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9557	March 4	J. H. Miller	East Albany	Consists of safflower; error in sale.
9558	4	Dan'l Donnelly	Rath-on-Hudson.	do do
9559	4	A. O. Roberts, M. D.	Troy	do do
9560	5	L. Burton & Co.	Greenbush	Good.
9561	5	F M. Brown & Co.	Troy	Consists of safflower; error in sale.
9562	5	John J. Healy	do	do do
9563	5	H. J. Eagle	do	do do
9564	5	Robert Glass	do	do do
9565	5	Daniel A. Healy	do	do do
9566	5	B. H. Gertzen	do	do do
9567	5	C. Herzog	do	do do
9568	5	H. Guardendorff	do	Good.
9629	9	Henry Schneider	do	do
9630	9	Paulus' Pharmacy	do	Consists of safflower; error in sale.
9631	9	Wm. H. Flandrau	do	do do
9632	9	W. L. Schneider	do	do do
9633	9	G. E. Stillman & Co.	do	Consists of oxide of iron; error in sale.
9634	9	Jacob Eagle	do	Consists of safflower; error in sale.
9635	9	J. T. O'Sullivan	do	do do
10284	29	E. J. Liebetrut	Buffalo	Good.
10285	29	E. G. Boysen	do	do

10291	29	Chas. A. Drefs	do	Consists of oxide of iron; error in sale.
10292	29	W. H. Borget	do	Good.
10293	29	M. J. Frisch	do	Consists of safflower; error in sale.
10294	29	Oscar Rydstrom	do	Good.
10295	29	Louis Weinmar	do	do
10296	29	Herman Frost	do	Consists of safflower; error in sale.
10297	29	J. F. Krug	do	Good.
10298	29	Geo. Reiman	do	Consists of safflower; error in sale.

Compound Effervescing Powder. (*Pulvis Effervescens Compositus, U. S. P.*)

Seidlitz powders are often carelessly made and are sometimes intentionally manufactured of short weight. The use of metric units is prescribed in the present pharmacopoeia, but the weights of the constituents have not been changed, each blue paper containing 160 grains of the mixture of Rochelle salt and sodium bicarbonate and each white paper containing 35 grains of tartaric acid. These powders are frequently of inferior quality in that the proportion of Rochelle salt is often diminished, that of the cheaper sodium bicarbonate being increased, and they are often so carelessly made, the constituents being generally measured and not weighed, that a very uncertain chemical result is obtained on dissolving and mixing the contents of the papers. Some years ago I made careful analyses of 70 powders purchased in different stores, and found that while the weights of both the acid and the seidlitz mixture showed a great diversity, being in some instances less than half and in others twice the correct weights, the average weights were not far from correct, but the ratio of Rochelle salt to soda in the mixture was, in at least a third of the samples, too low to be explained, save by intentional decrease. The official proportions are almost precisely those required by theory to secure perfect neutralization of the tartaric acid by the sodium bicarbonate, and it will readily be seen that if these proportions vary materially a very different and by no means satisfactory result will be obtained. A firm in Brooklyn has advertised in the pharmaceutical journals seidlitz powders called "regular," containing but two drachms instead of two drachms and two scruples of the seidlitz mixture in the blue paper, which is exactly 25 per cent. short weight. These powders are advertised at a price $2 a gross less than that charged by the same firm for "full weight" powders, giving those druggists who desire to buy cheap goods without regard to quality, an opportunity to effect a small saving.

Fifteen samples were examined, of which there were of good weight and quality, 6; fair (as to weight), 4; inferior (as to

ht), 4; and in one the tartaric acid was so greatly in excess of proper weight that it is classed as of excessive strength. ss the ratio of the constituents which is prescribed by the macopoeia is fairly observed, the resulting solution obtained issolving and mixing the contents of the papers will contain r an excess of undecomposed sodium bicarbonate on the one l or an excess of tartaric acid on the other. If the weight of powders is decidedly diminished, their medicinal value is, of se, lessened. Particulars concerning the samples are applied.

Seidlitz Powder, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
10339	March 29	E. J. Liebtrut	Buffalo	Good weight and quality.
10340	29	E. G. Boysen	do	do
10341	29	H. V. Roese	do	do
10342	29	Theo. V. Bauer	do	White paper 25.33 per cent. over weight and blue paper 15.30 per cent. under weight; inferior.
10343	29	Geo. Schaefer	do	White paper 48.44 per cent. and blue paper 5.80 per cent. over weight; excessive strength.
10344	29	W. P. Joseph	do	White paper 39.55 per cent. over weight and blue paper 16.45 per cent. under weight; inferior.
10345	29	C. J. Dwyer	do	Good weight and quality.
10346	29	Retel's Pharmacy	do	White paper 42.22 per cent. over weight; fair.
10347	29	Chas. A. Drefs	do	White paper 32.00 per cent. over weight and blue paper 10.93 per cent. under weight; inferior.
10348	29	W. H. Borget	do	Good weight and quality.
10349	29	M. J. Frisch	do	White paper 32.44 per cent. over weight and blue paper 14.83 per cent. under weight; inferior.
10350	29	Oscar Rydstrom	do	Good weight and quality.
10351	29	Louis Weinmar	do	Fair weight and quality.
10352	29	Herman Frost	do	do
10353	29	J. F. Krug	do	do

Sodium Bromide.—(*Sodii Bromidum, U. S. P.*)

Five samples examined and all of good quality, as follows:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9619	March 9	Henry Schneider	Troy	Good.
9620	9	Cavanaugh & Perkins	do	do
9621	9	W. L. Schneider	do	do
9622	9	H. G. Swart	do	do
9623	9	Jacob Eagle	do	do

Aromatic Sulphuric Acid. (*Acidum Sulphuricum Aromaticum, U. S. P.*)

Sixty-two samples examined, of which there were of good quality but 9, or less than 15 per cent. of the samples; of fair quality, 24, and inferior, 29. This preparation should contain, according to the pharmacopoeial requirement, "about 20 per cent. of official sulphuric acid, partly in form of ethyl-sulphuric acid." The samples examined varied from 6.20 to 18.80 per cent. of absolute acid, and, therefore, all contained a slightly higher percentage of official acid. Samples containing from 16 to 25 per cent. have been rated as of good quality; over 25 per cent., excessive strength; from 13.5 to 16 per cent., fair; and under 13.5 per cent., inferior quality.

This article is one which is of very uncertain strength as sold in the stores. Of 548 samples which have been examined in previous years, only 68, or 13 per cent., could be rated as of satisfactory quality. The extreme variations in all samples examined to date have been from 1.3 to 28.50 per cent. Such a result is at first sight most surprising, but it is to be observed that this preparation, though standard, and, in a sense, important, is, as a matter of fact, much less prescribed than formerly, so that it is prepared on a smaller scale and less frequently than heretofore. And, secondly, that many druggists continue to make it according to the process of the pharmacopoeia of 1870, which contained not much to exceed 10 per cent. of acid. Such a practice is without valid excuse, though often defended. It results, in some cases, from a conservative clinging to an old and familiar process, and in others, from the fact that the only authoritative text-book in some stores is an old pharmacopoeia, or, more frequently, an old dispensatory based upon an old pharmacopoeia. The pharmacist must adapt all his work to existing authorities, and while a few cases may possibly exist in which he may retain an old process in preference to adopting the new one, and such a course be defensible, such cases will be exceedingly rare. Particulars concerning the samples are appended.

Aromatic Sulphuric Acid, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1894.				
9303	December 20	C. E. Purington & Co.	Johnstown	12.1	Inferior.
9304	20	J. F. Cahill	do	11.7	do
9305	20	Sutliff & Livingston	do	14.0	Fair.
9306	20	W. B. Van Vliet	do	12.8	Inferior.
9307	20	D. H. Van Heusen	do	12.5	do
9308	20	Houck & Patrick	Gloversville	14.2	Fair.
9309	20	Estate of J. B. Stone	do	15.5	do
9310	20	A. M. Simmons	do	13.6	do
9311	20	J. A. Miller & Co	do	12.6	Inferior.
9312	20	G. A. Cole	do	14.8	Fair.
9313	22	A. J. Fellows	Chatham	13.7	do
9314	22	H. J. Baringer, Jr.	do	12.2	Inferior.
9315	22	A. McKinstry & Son	Hudson	12.5	do
9316	22	Van Tassel & Tobey	do	12.3	do
9317	22	J. M. Johnson	do	6.2	do
9318	22	B. Stedman	do	14.7	Fair.
9319	22	Wardle & Son	do	16.1	Good.
9320	22	Roy Webber	Schenectady	12.3	Inferior.
9321	22	Van Zandt & Rector	do	11.0	do
9322	22	G. E. Duryee	do	13.5	Fair.
9323	22	Wm. Sauter	do	15.7	do
9324	22	J. T. Lyon	do	13.1	Inferior.
9325	22	E. Rosa	do	18.8	Good.
9326	22	A. T. Veeder & Son	do	10.5	Inferior.
9327	22	G. Steinfuhrer	do	14.3	Fair.
9328	22	C. H. Horstmann	do	12.1	Inferior.

Aromatic Sulphuric Acid, U. S. P. — (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1894.				
9329	December 22	H. A. Kerste	Schenectady	11.6	Inferior.
9330	22	H. B. Duryee	do	12.9	do
	1895.				
9467	March 4	Jas. H. Miller	Greenbush	18.5	Good.
9468	4	Daniel Donnelly	East Albany	16.6	do
9469	4	A. O. Roberts, M. D	Bath-on-Hudson	16.1	do
9470	4	J. H. Conine	do	15.0	Fair.
9471	5	A. M. Knowlson	Troy	14.5	do
9472	5	C. H. Wiberly	do	12.6	Inferior.
9473	5	Moncrief & Francis	do	12.4	do
9474	5	L. Burton & Co.	do	12.9	do
9475	5	F. M. Brower & Co.	do	11.7	do
9476	5	Geo. W. Holcomb	do	15.4	Fair.
9477	5	John J. Healy	do	13.7	do
9478	5	H. J. Eagle	do	11.8	Inferior.
9479	5	Robert Glass	do	18.5	Good.
9480	5	Daniel A. Healy	do	9.3	Inferior.
9481	5	B. H. Gertzen	do	16.5	Good.
9482	5	Herman Guadendorff	do	12.8	Inferior.
9636	9	Spotten's Pharmacy	do	11.7	do
9637	9	J. M. Donnelly	do	12.6	do
9638	9	D. F. Magill	do	14.4	Fair.
10308	29	E. J. Liebetrut	Buffalo	17.7	Good.
10309	29	H. V. Roese	do	12.0	Inferior.
10310	29	Geo. Reinman	do	14.5	Fair.
10311	29	Theo. V. Bauer	do	13.7	do
10312	29	Geo. Schaefer	do	14.2	do
10313	29	W. P. Joseph	do	15.1	do
10314	29	C. J. Dwyer	do	13.1	Inferior.

10317	29	W. H. Borget	.....	do	.....	15.0	do
10318	29	M. J. Frisch	.....	do	.....	14.6	do
10319	29	Oscar Rydstrom	.....	do	.....	13.2	Inferior.
10320	29	Louis Weinmar	.....	do	.....	13.5	Fair.
10321	29	Herman Frost	.....	do	.....	16.9	Good.
10322	29	J. F. Krug	.....	do	.....	12.4	Inferior.
						15.7	Fair.

Diluted Sulphuric Acid. (*Acidum Sulphuricum Dilutum, U. S. P.*)

The strength of this preparation has been very slightly increased in the last pharmacopœia. It should contain 10 per cent., by weight, of absolute sulphuric acid, and have a specific gravity of about 1.070 at 59 degrees Fahrenheit. Sixty-eight samples were examined, of which there were of good quality. 46; fair, 9; inferior, 6, and of excessive strength, 7. In rating these samples the same standards have been employed as for diluted hydrobromic acid, which see. The samples varied in strength from 4.70 to 19.90 per cent. of absolute acid. Particulars concerning the samples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.	Quality.
	1894.				
9331	December 20	J. F. Cahill	Johnstown	9.5	Good.
9332	20	Sutliff & Livingston	do	17.7	Excessive strength.
9333	20	W. B. Van Vliet	do	6.1	Inferior.
9334	20	Estate of J. B. Stone	Gloversville	9.6	Good.
9335	20	G. Rowe	do	4.9	Inferior.
9336	20	J. A Miller & Co	do	9.9	Good.
9337	20	G. A. Cole	do	9.4	do
9338	22	A. J. Fellows	Chatham	9.2	do
9339	22	H. J. Baringer, Jr.	do	9.0	do
9340	22	Washburn & Seymour	do	9.8	do
9341	22	C. S. Hanks	Hudson	9.9	do
9342	22	A. McKinstry & Son	do	9.8	do
9343	22	Van Tassel & Tobey	do	8.6	Fair.
9344	22	J. M. Johnson	do	17.1	Excessive strength.
9345	22	Rice Bros.	do	8.8	Fair.
9346	22	B. Stedman	do	9.0	Good.
9347	22	Wardle & Son	do	8.7	Fair.
9348	22	Ray Webber	Schenectady	6.5	Inferior.
9349	22	H. S. Moore	do	10.0	Good.
9350	22	Van Zandt & Rector	do	16.5	Excessive strength.

9352		22	Wm. Sauter	do		9.0	do
9353		22	J. T. Lyon	do		9.0	do
9354		22	E. Rose	do		10.7	do
9355		22	A. T. Veeder & Son	do		10.6	do
9356		22	G. Steinfuler	do		9.7	do
9357		22	C. H. Horstman	do		9.0	do
9358		22	H. A. Kerste	do		9.7	do
9359		22	H. B. Duryee	do		10.1	do
	1895.						
9673	March	9	Drake & Moffit	Troy		4.7	Inferior.
10190		27	R. K. Smither	Buffalo		8.4	Fair.
10191		27	J. C. Landsbeft	do		12.5	Good.
10192		27	C. W. Armstrong	do		11.0	do
10193		27	Wm. D. Rose	do		8.2	Fair.
10194		27	Hubbard & Co	do		10.9	Good.
10195		27	H. C. Cleveland	do		10.5	do
10196		27	C. W. Tuerke	do		9.7	do
10197		27	E. H. Beaman	do		10.1	do
10198		27	P. M. Lockie	do		16.7	Excessive strength.
10199		27	Robert E. Jones	do		10.0	Good.
10200		27	R. S. Fowler	do		8.3	Fair.
10201		27	W. H. Chase	do		9.5	Good.
10202		27	J. S. Greey	do		13.5	Excessive strength.
10203		27	J. H. Kautz	do		10.2	Good.
10204		27	W. H. J. Smith	do		8.4	Fair.
10205		27	Vaughn's Pharmacy	do		9.5	Good.
10206		27	Neil McEachren	do		9.6	do
10207		28	Warren E. Wolfe	do		9.6	do
10208		28	H. J. Diamond	do		19.9	Excessive strength.
10209		28	J. W. Hodson	do		10.2	Good.
10210		28	R. H. Maltbie	do		6.5	Inferior.
10211		28	G. O. Baxter	do		8.3	Fair.
10212		28	E. N. Bargar	do		9.1	Good.
10213		28	J. W. Menzies	do		7.2	Inferior.
10214		28	Wm. Coulson Drug Co	do		9.0	Good.
10215		28	Smith's Drug Store	do		9.0	do
10216		28	F. M. Dunning	do		10.0	do
10217		28	M. Van Every	do		15 5	Excessive strength.
10218		28	E. L. A. Schwabe	do		9.7	Good.

Diluted Sulphuric Acid.— (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Per cent. of absolute acid.*	Quality.
	1895.				
10219	March 28	J. E. Smith	Buffalo	10.3	Good.
10220	28	A. J. Lies	do	9.5	do
10221	28	A. J. Werner	do	8.1	Fair
10222	28	Geo. Reiman	do	9.0	Good.
10223	28	J. L. Perkins & Co	do	10.6	do
10224	28	J. M. Horton	do	9.4	do
10225	28	Gibbs & Felch	do	9.7	do
10226	28	C. F. Wohrle	do	9.1	do
10227	28	F. L. Anderson	do	10.3	do

Precipitated Sulphur. (*Sulphur Præcipitatum, U. S. P.*)

Sixty-eight samples examined, of which but nine were of good uality; one was of fair quality; 47 were inferior, containing large uantities of calcium sulphate, and the remaining 11 consisted f sublimed sulphur, or common "flowers of sulphur," ignorantly r carelessly sold for precipitated sulphur.

Precipitated sulphur is an agent of no great therapeutic value, erhaps, but it is used, both internally and externally, for a variety f purposes. It is a good example of a class of substances often old in the stores of inferior quality because a cheap but impure rticle is easily obtainable. It should be made by boiling sulhur with slaked lime and decomposing the resulting calcium ulphide and thio-sulphate with hydrochloric acid, precipitating he sulphur and yielding a soluble calcium chloride, easily reoved by washing. A cheap and impure article known as lac sulphur," a term not recognized in the pharmacopoeia, is owever manufactured in which the precipitation is effected with ulphuric acid, resulting in the formation of calcium sulphate, hich, being but slightly soluble in water, and precipitated along ith the sulphur, is not removed by washing, but remains as an mpurity in the sulphur. It frequently contains as much as 40 er cent. of calcium sulphate, and I have seen a sample which, hen used in a medicinal mixture, contained so much that it olidified at the bottom of the bottle through the "setting" of he sulphate. Of 248 samples examined in previous years but 77, r 31 per cent., were of good quality. This sale of common lac ulphur for the official precipitated sulphur is entirely inexcusable, nd since precipitated sulphur of good quality is easily obtainble in the market at a slightly higher price this substitution ught never to be made. Pharmacists ought to be familiar with he various grades of the medicinal articles in which they deal, nd the tests by which genuine precipitated sulphur can be disinguished from the impure commercial article are laid down in he pharmacopoeia and are easily applied by the retailer. In this ase, however, he hardly needs even to make a test, for the price

he pays and name under which he buys sufficiently indica
quality of the article supplied him. It is not a question wl
the article is one of prime importance or not, but whether a
largely adulterated with inert mineral matter ought to b
for medicinal uses when a pure one is easily obtainable.
following table gives a description of the samples:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1894.			
9443	December 20	C. E. Purington & Co	Johnstown	Largely adulterated with sulphate of lime; inferior.
9444	20	J. F. Cahill	do	Largely adulterated with sulphate of lime; inferior.
9445	20	Sutliff & Livingston	do	Largely adulterated with sulphate of lime; inferior.
9446	20	W. B. Van Vliet	do	Good.
9447	20	D. H. Van Heusen	do	Largely adulterated with sulphate of lime; inferior.
9448	20	Estate of J. B. Stone	Gloversville	Largely adulterated with sulphate of lime; inferior.
9449	20	J. A. Van Auken	do	Consists of sublimed sulphur; error in sale.
9450	22	A. J. Fellows	Chatham	Largely adulterated with sulphate of lime; inferior.
9451	22	H. J. Baringer, Jr	do	Good.
9452	22	C. S. Hanks	Hudson	Fair.
9453	22	A. McKinstry & Son	do	Largely adulterated with sulphate of lime; inferior.
9454	22	Van Tassel & Tobey	do	Good.
9455	22	J. M. Johnson	do	Largely adulterated with sulphate of lime; inferior.
9456	22	Rice Bros	do	Consists of sublimed sulphur; error in sale.
9457	22	B. Stedman	do	Largely adulterated with sulphate of lime; inferior.

Precipitated Sulphur, U. S. P.—(*Continued*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1894.			
9458	December 22	Wardle & Son	Hudson	Largely adulterated with sulphate of lime; inferior.
9459	22	Roy Webber	Schenectady	Largely adulterated with sulphate of lime; inferior.
9460	22	H. S. Moore	do	Largely adulterated with sulphate of lime; inferior.
9461	22	William Sauter	do	Good.
9462	22	J. T. Lyon	do	Largely adulterated with sulphate of lime; inferior.
9463	22	E. Rosa	do	Largely adulterated with sulphate of lime; inferior.
9464	22	G. Steinfuhrer	do	Largely adulterated with sulphate of lime; inferior.
9465	22	H. A. Kerste	do	Largely adulterated with sulphate of lime; inferior.
9466	22	H. B. Duryee	do	Largely adulterated with sulphate of lime; inferior.
	1895			
9736	March 21	James S. Calkins	Cohoes	Good.
9737	21	P. H. Spillane	do	Largely adulterated with sulphate of lime; inferior.
9738	21	Archibold Bros	do	Good,
9739	21	D. A. Bellegarde	do	Largely adulterated with sulphate of lime; inferior.
9740	21	Thomas T. Kennedy	do	Good.

				error in sale.
10038	27	C. W. Armstrong	do	Largely adulterated with sulphate of lime; inferior.
10039	27	W. D. Rose	do	Largely adulterated with sulphate of lime; inferior.
10040	27	Hubbard & Co	do	Largely adulterated with sulphate of lime; inferior.
10041	27	H. C. Cleveland	do	Consists of sublimed sulphur; error in sale.
10042	27	C. W. Tuerke	do	Consists of sublimed sulphur; error in sale.
10043	27	E. H. Beaman	do	Consists of sublimed sulphur; error in sale.
10044	27	P. M. Lockie	do	Largely adulterated with sulphate of lime; inferior.
10045	27	Geo. W. Sayles	do	Largely adulterated with sulphate of lime; inferior.
10046	27	Robert E. Jones	do	Consists of sublimed sulphur; error in sale.
10047	27	R. S. Fowler	do	Largely adulterated with sulphate of lime; inferior.
10048	27	W. H. Chase	do	Largely adulterated with sulphate of lime; inferior.
10049	27	J. S. Greey	do	Largely adulterated with sulphate of lime; inferior.
10050	27	J. H. Kautz	do	Largely adulterated with sulphate of lime; inferior.
10051	27	W. H. J. Smith	do	Consist of sublime of sulphur; error in sale.
10052	27	Vaughn's Pharmacy	do	Largely adulterated with sulphate of lime; inferior.
10053	28	Warren E. Wolfe	do	Good.
10054	28	H. J. Dimond	do	Largely adulterated with sulphate of lime; inferior.

Precipitated Sulphur, U. S. P.—(*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
10055	March 28	J. W. Hodson	Buffalo	Largely adulterated with sulphate of lime; inferior.
10056	28	R. H. Maltbie	do	Largely adulterated with sulphate of lime; inferior.
10057	28	G. O. Baxter	do	Largely adulterated with sulphate of lime; inferior.
10058	28	E. N. Bargar	do	Largely adulterated with sulphate of lime; inferior.
10059	28	J. W. Menzies	do	Consists of sublimed sulphur; error in sale.
10060	28	Wm. Coulson Drug Co.	do	Largely adulterated with sulphate of lime; inferior.
10061	28	Smith's Drug Store	do	Largely adulterated with sulphate of lime; inferior.
10062	28	F. M. Dunning	do	Largely adulterated with sulphate of lime; inferior.
10063	28	M. Van Every	do	Consists of sublimed sulphur; error in sale.
10064	28	E. L. A Schwabe	do	Largely adulterated with sulphate of lime; inferior.
10065	28	J. E. Smith	do	Largely adulterated with sulphate of lime; inferior.
10066	28	A. J. Lies	do	Largely adulterated with sulphate of lime; inferior.
10067	28	A. J. Werner	do	Largely adulterated with sulphate of lime; inferior.

10069	28	J. L. Perkins & Co.	do	Largely adulterated with sulphate of lime; inferior.
10070	28	J. M. Horton	do	Largely adulterated with sulphate of lime; inferior.
10071	28	Gibbs & Felch	do	Consists of sublimed sulphur; error in sale.
10072	28	C. F. Wohrle	do	Largely adulterated with sulphate of lime; inferior.
10073	28	F. L. Anderson	do	Largely adulterated with sulphate of lime; inferior.

Washed Sulphur. (*Sulphur Lotum, U. S. P.*)

Thirty-nine samples examined, of which 18 were of good quality; six of inferior quality, not having been washed at all, but possessing all the acidity which often characterizes sublimed sulphur or common flowers of sulphur; 11 contained large amounts of sulphate of lime and consisted of common "lac sulphur;" three consisted of precipitated sulphur of good quality, and one of ether, carelessly dispensed and labeled "washed ether," in response to a plainly written request for washed sulphur. Concerning this article I quote from a former report: "Washed sulphur is one of the articles which has been selected for examination, not because it is a very important drug, but to test the carefulness and reliability of the dealer. The natural acidity of commercial sublimed sulphur, or flowers of sulphur, is removed by treatment with ammonia and subsequent washing, and as it is easily prepared by the retailer, or obtained from reliable dealers, there is no reason why another article should be substituted for it or an impure article be sold." The following table gives a description of the samples:

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9649	March 9	Henry Schneider	Troy	Good.
9650	9	G. T. Butler & Co	do	do
9651	9	J. T. O'Sullivan	do	do
9652	9	Paulus' Pharmacy	do	Largely adulterated with sulphate of lime; inferior.
9653	9	Wm. H. Flandrau	do	Largely adulterated with sulphate of lime; inferior.
9654	9	G. E. Stillman & Co	do	Largely adulterated with sulphate of lime; inferior.
9655	9	Jacob Eagle	do	Consists of sublimed sulphur; error in sale.
9964	25	W. S. & J. J. Patterson	Batavia	Good.
9965	25	Cooley & Gould	do	Consists of precipitated sulphur; error in sale.
9966	25	J. M. Walkinshaw	do	Good.
9967	25	John Harper	Dunkirk	Consists of sublimed sulphur; acid reaction; inferior.
9968	25	Monroe's Pharmacy	do	Good.
9969	25	Van Scoter & West	do	do
9970	25	F. K. Lyon	do	do
9971	25	F. H. Edmunds	Fredonia	Largely adulterated with sulphate of lime; inferior.
9972	25	F. C. F. Sievert	do	Largely adulterated with sulphate of lime; inferior.
9973	25	Chatsey & Clothier	do	Consists of precipitated sulphur; inferior.

Washed Sulphur, U. S. P.— (*Concluded*).

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Quality.
	1895.			
9974	March 26	J. R. Tanner	Buffalo	Good.
9975	26	M. Willoughby, M. D	do	Largely adulterated with sulphate of lime; inferior.
9976	26	W. S. O'Brien	do	Good.
9977	26	C. N. Riggs	do	Consists of ether; error in sale.
9978	26	Denny & Field	do	Good.
9979	26	Elwood & Thompson	do	Largely adulterated with sulphate of lime; inferior.
9980	26	W. G. Gregory	do	Good.
9981	26	W. C. Dambach	do	do
9982	26	Geo. E. Sykes	do	do
9983	26	F. J. Wiltse	do	Consists of sublimed sulphur, acid reaction; inferior.
9984	26	Blackney & Co	do	Good.
9985	26	C. Rodenbach	do	Consists of sublimed sulphur, acid reaction; inferior.
9986	26	Thomas' Drug Store	do	Largely adulterated with sulphate of lime; inferior.
9987	26	Smither & Thurstone	do	Good.
9988	26	W. A. Kendall	do	do
9989	26	Kingston's Pharmacy	do	Largely adulterated with sulphate of lime; inferior.
9990	26	Jeffrey & Gotshall	do	Consists of sublimed sulphur, acid reaction; inferior.
9991	26	Lyman & Sloan	do	Consists of precipitated sulphur; error in sale.

9992	26	Stoddart Bros	do	Largely adulterated with sulphate of lime; inferior quality.
9993	27	Howard Wade	do	Good.
9994	27	P. S. McArthur	do	Largely adulterated with sulphate of lime; inferior.
9995	27	Bushnell's Pharmacy	do	Consists of sublimed sulphur, acid reaction; inferior.

Distilled Water. (*Aqua Destillata, U. S. P.*

Twenty samples examined, of which there were of good quality, 13; fair, 1, and inferior, 6. In the latter samples the total solids amounted to from 0.044 to 0.126 grammes from the evaporation of 1,000 cc., and some of them contained chlorides or nitrites or both. From these results it is evident that impure rain water or mere tap water is often employed for and sold as distilled water, and since the latter is easily prepared or purchased in a condition of comparative purity, such substitution is entirely inexcusable. Particulars concerning the samples are appended.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Residue from 1000 cc. in grams.	Quality.
	1894.				
9408	December 20	J. F. Cahill	Johnstown	.....	Good.
9409	20	Sutliff & Livingston	do	0.124	Contains chlorides and nitrites; inferior.
9410	20	D. H. Van Heusen	do	.....	Good.
9411	20	Houck & Patrick	Gloversville	.....	do
9412	20	A. M. Simmons	do	.....	do
9413	20	G. Rowe	do	0.126	Contains chlorides; inferior.
9414	22	A. J. Fellows	Chatham	.....	Good.
9415	22	A. McKinstry & Son	Hudson	0.044	Fair.
9416	22	Van Tassell & Tobey	do	0.084	Contains chlorides; inferior.
9417	22	J. M. Johnson	do	0.118	Contains chlorides; inferior.
9418	22	Rice Bros	do	.....	Good.
9419	22	B. Stedman	do	.....	do
9420	22	Wardle & Son	do	0.084	Contains chlorides; inferior.
9421	22	G. F. Durvee	Schenectady		Good.

9422	22	J. T. Lyon	do		.....	do
9423	22	E. Rosa	do		.....	do
9424	22	A. T. Veeder & Son	do		.....	do
9425	22	C. H. Horstmann	do		.....	do
9426	22	H. A. Kerste	do		.....	do
9427	22	H. B. Duryee	do		0.090	Contains chlorides; inferior.

Whisky. (*Spiritus Frumenti, U. S. P.*)

Four samples examined, of which one was of good and tl
fair quality. The pharmacopoeia defines whisky as "an al
liquid obtained by the distillation of the mash of fermented
(usually of mixtures of corn, wheat and rye) and at lea
years old. Its specific gravity should not be more than
nor less than 0.917, corresponding approximately to an al
strength of 44 to 50 per cent. by weight, or 50 to 58 per c
volume. On the full evaporation of 100 cubic centimeter
water-bath the weight of the residue, dried at 212 degrees F
heit, should not exceed 0.25 gram. The last portions vap
should not have a harsh or disagreeable odor and the r
should be devoid of any sweet or distinctly spicy taste."
tests are prescribed by the pharmacopoeia, but the above a
most important and suffice to determine whether a whisl
been watered or contains more than traces of fusel oil, or w
sugar, glycerine or aromatic substances have been added
Last year 76 samples were examined, of which 22 complie
the pharmacopoeial requirements and were rated as of
quality, while 10 more did not vary very materially from
requirements and were rated as of fair quality. The rem
44 samples varied so widely from the pharmacopoeial sta
either as to specific gravity, total solids or otherwise, as t
them in the list of inferior articles, according to our met
classification. Such samples are not necessarily of poor
in the ordinary sense, nor was there any evidence that th
tained harmful constituents, but they failed to comply w
pharmacopoeial requirements in essential respects. The c
idea that poisonous or harmful adulterants are frequently
to distilled liquors is very far from the truth. The chief
rants made use of are water, sugar, caramel (as a coloring
glycerine and artificial flavoring extracts, none of these subs
being in themselves necessarily injurious. Particulars c
ing the samples examined are appended.

Whisky, U. S. P.

Number of sample.	Date of collection.	OF WHOM PURCHASED.	Where purchased.	Specific gravity.	Residue from 100 cc. in grams.	Quality.
	1895.					
10304	March 29	E. J. Liebetrut	Buffalo	0.917	0.28	Good.
10305	29	C. J. Dwyer	do	0.939	0.39	Fair.
10306	29	Chas. A. Drefs	do	0.934	0.35	do
10307	29	M. J. Frisch	do	0.940	0.40	do

Water Analyses.

During the year 43 samples of water were analyzed. Most of the samples were sent by local boards of health, and in many cases the source was not stated definitely. The examinations were made as soon as possible after receipt of the sample and the results reported without delay. These results, not having been published elsewhere, are given in a condensed form in the appended table.

Miscellaneous Water Analyses — (Results Parts per 100,000).

Record number.	SOURCE OF SAMPLE.	Color.	Odor.	Chlorine.	Nitrites.	Free ammonia.	Albuminoid ammonia.	Total solids.	Loss on ignition.	Mineral matter.
254	Driven well at Mount Vernon	Light greenish	None	0.50	None	0.0055	0.0100	12.00	4.20	7.80
255	From Caledonia	Light greenish	None	14.00	Trace	0.0255	0.0075	161.00	44.80	116.20
256	Filtered rain water, Suspension Bridge	Light greenish	None	0.15	Present	0.0245	0.0035	12.80	3.00	9.80
257	City water, Suspension Bridge	Light greenish	None	0.40	None	Trace	0.0085	13.80	4.60	9.20
258	Well at Caledonia	Light greenish	None	25.20	Trace	0.0060	0.0105	132.00	25.60	106.40
259	Spring at Caledonia	Light greenish	None	4.10	None	0.0090	0.0045	41.60	11.00	30.60
260	Creek at Forestville	Light greenish	None	0.05	None	0.0015	0.0040	6.80	2.40	4.40
261	Spring at Easton	Light greenish	None	0.10	None	0.0010	0.0030	19.80	2.80	17.00
262	Well at Candor	Slightly brownish	None	Trace	None	0.0005	0.0052	11.40	3.00	8.40
263	From Chatham	Light greenish	None	11.70	Trace	Trace	0.0050	55.80	11.00	44.80
264	Well at Hoosick Falls	Almost colorless	None	0.30	None	Trace	0.0042	10.20	3.60	6.60
265	From Binghamton Water Works, No. 1	Light yellowish green	None	0.10	None	0.0035	0.0072	6.80	3.60	3.20
266	From Binghamton Water Works, No. 2	Light yellowish	None	0.35	None	0.0005	0.0052	11.20	4.40	6.80
267	From Binghamton Water Works, No. 3	Light yellowish green	None	0.05	None	0.0025	0.0065	6.00	2.60	3.40
268	City water, Bainbridge	Brownish yellow	Slight	0.20	None	0.0013	0.0095	3.60	1.70	1.90
269	Reservoir at Corinth	Yellowish green	Peaty	0.20	None	0.0070	0.0240	6.20	3.40	2.80
270	Hudson Water Works, No. 1	Greenish tint	None	0.45	None	0.0055	0.0135	12.40	6.20	6.20
271	Hudson Water Works, No. 2	Greenish tint	None	0.45	None	0.0030	0.0125	12.10	5.40	6.70
272	Well at Ellenville	Light greenish	None	1.80	None	0.0020	0.0050	21.70	7.90	13.80
273	Well at Potsdam	Colorless	Slight	0.80	Considerable.	0.0013	0.0150	45.00	9.20	35.80
274	Well at Potsdam	Colorless	Slight	1.80	Present	0.0011	0.0068	37.80	10.80	27.00
275	Brook at Potsdam	Nearly colorless	None	0.15	Present	0.0013	0.0067	14.50	5.10	9.40
276	Spring at Potsdam	Nearly colorless	None	0.20	Trace	0.0013	0.0023	12.20	3.20	9.00
277	Spring at Potsdam	Slightly yellowish	Very slight	0.15	Present	0.0005	0.0021	11.40	3.00	8.40
278	From Berlin	Colorless	Slight	1.20	None	0.0045	0.0060	27.20	6.40	20.80
279	From Potsdam	Yellowish	None	2.60	Present	0.0013	0.0205	43.60	20.20	23.40
280	From Potsdam	Yellowish	Slight	3.30	None	0.0018	0.0405	37.90	19.40	18.50
281	Village supply, Chatham	Nearly colorless	None	0.90	None	Trace	0.0040	16.20	7.80	8.40
282	From Delhi, No. 1	Light greenish yellow	Slight	0.15	None	0.0465	0.0120	4.90	3.20	1.70

	From Delhi, No. 2	Light greenish yellow	Slight							
284	Reservoir at Schenevus	Yellowish	None	0.15	None	0.0080	0.0085	4.60	8.60	1.90
285	Reservoir at Port Jervis	Slightly yellowish	Slight	0.10	None	0.0083	0.0126	4.60	8.60	1.00
286	Well at Ellenville	Colorless	None	0.90	None	0.0045	0.0076	8.80	1.40	9.40
287	Village supply, Ellenville	Nearly colorless	None	5.80	None	0.0045	0.0085	27.60	11.00	16.60
288	City supply, Mount Vernon	Nearly colorless	None	0.15	None	0.0005	0.0098	7.80	8.60	4.90
289	Well at Potsdam	Colorless	None	0.70	None	0.0083	0.0055	8.80	8.60	5.60
290	Racquette river, Potsdam	Brownish tint	None	8.60	Present	0.005	0.0069	84.60	18.60	66.00
291	Spring at Gowanda	Colorless	None	0.45	None	0.047	0.0105	5.20	8.80	9.40
292	Well at Churchville	Nearly colorless	Slight	0.90	Trace	0.0083	0.0043	19.60	8.80	15.60
293	Well at Churchville	Brownish	Slight	4.40	None	0.005	0.0097	81.60	18.60	68.40
294	Well at Gowanda	Slightly yellowish	None	6.40	Present	0.2540	0.0815	89.80	28.20	54.60
295	Spring No. 1 at Roxbury	Slightly yellowish	None	0.15	Trace	0.0067	0.0060	55.40	28.20	28.20
296	Spring No. 2 at Roxbury	Yellowish	Slight	2.70	None	1.0008	0.0060	6.20	8.20	8.00
					Present	1.8540	0.0450	46.20	11.20	35.00

Conclusion.

Since the establishment of this laboratory, July 1, 1891, the total cost of all work, including salaries of director, assistant chemist and collector, cost of samples and expenses of collection of same, apparatus, laboratory fittings and supplies, has been $15,609.15, or an average of $3,468.70 per annum. For this sum and during this period nearly 11,000 samples of foods, drugs, waters and miscellaneous articles of all kinds have been made, and many special investigations conducted. If compared with the cost of similar work, as carried on in other States, it will be seen to have been economically conducted. Its influence in improving the quality of the drugs and many food articles sold in this State, in protecting water supplies and informing the public in many directions upon sanitary matters has been far-reaching and of great value, but with better facilities than are now possessed and a larger appropriation the work might be greatly extended and its value proportionally increased. The personnel of the laboratory remained the same as during the preceding year until February 1, when Mr. F. P. Huested resigned his position as collector, and Mr. T. J. Bradley, Ph. G., was, after passing a competitive civil service examination, subsequently appointed in his place. June 1, through insufficiency of the appropriation, his services and those of Dr. E. J. Wheeler, assistant chemist, were necessarily dispensed with, to my great regret, the more especially as Dr. Wheeler had rendered very valuable service during the four years preceding and had become very familiar with the work. Since that date the work of the laboratory has been, of necessity, greatly restricted, and it is hoped that adequate provision may speedily be made for the continuation of the work in the future and on a larger scale than in the past.

Respectfully submitted,

WILLIS G. TUCKER,

Director, State Board of Health Laboratory.

ALBANY, N. Y., *January* 1, 1896.

RULES AND REGULATIONS

FOR THE

ANITARY PROTECTION OF WATER SUPPLIES.

18

the State Board of Health of the State of New York:

At a regular meeting of the board of water commissioners of the age of Coxsackie, Greene county, N. Y., held on the 15th day January, 1895, it was

Resolved, That, whereas, a reservoir having been built for the pose of storing water for domestic uses of the inhabitants of village of Coxsackie, N. Y., and the water-shed from which l supply is derived being subject to the danger of contamina- from the residents of the vicinity thereof; and,

Whereas, Said reservoirs being located in the town of New timore, Greene county, N. Y., and is not within the territorial isdiction of the local board of health of the village of Coxsackie of the town of Coxsackie, therefore, the said board of water missioners of said village of Coxsackie desire that the State rd of Health may inspect said reservoir and water-shed and ablish such rules and regulations as may be necessary and per to preserve said waters from pollution, under and pur- nt to the provisions of article 5 of chapter 661 of the Laws of 3.

T. B. ALCOTT,
President.

E. MACKEY,
Secretary.

NEW YORK, *May* 1, 1895.

n. C. W. ADAMS, *State Engineer and Surveyor, Chairman of Committee State Board of Health:*

Dear Sir.— I send you my report in regard to the protection m contamination of the potable water supply of the village of tsackie, Greene county.

Respectfully,

JOHN BOGART,
Consulting Engineer.

REPORT.

The board of water commissioners of the village of Coxsackie transmitted to the State Board of Health resolutions adopted by the board of water commissioners on the 15th day of January, 1895, stating that a reservoir had been built for the purpose of storing water for domestic use; that the water-shed from which the supply for this reservoir is gathered is subjected to danger from contamination from residences in the vicinity; that the reservoir is located in the town of New Baltimore, and not subject to the territorial jurisdiction of the local board of health of the village of Coxsackie, and, therefore, that the water commissioners of the village of Coxsackie desired that the State Board of Health should order an inspection of the reservoir and water-shed and establish such rules and regulations as may be necessary and proper to preserve the water from pollution.

A great depth of snow existed upon the water-shed at the time of my receipt of these papers; I therefore wrote to the health board of the village, and was requested to postpone the examination until it could be more fully made than was then possible. I have now made such examination and, with the officers of the local board of health, have inspected the reservoir and gone over the lines of the streams which supply the water.

The reservoir is formed by the construction of a dam across the valley of the stream a few miles above the village. It impounds about 4,000,000 gallons. The dam is built entirely of concrete. The valley of the stream at the location of the dam is about 200 feet wide, at the level of the top of the dam and the concrete dam is connected, both at the bottom and sides, with the limestone rock. The dam is an interesting and bold construction. It is vertical on the upper face, five feet in width at the top and with a batter of one horizontal to three feet vertical on the down stream face. The concrete is made of broken stone and sand, found in the immediate vicinity and, I understand, of American Portland cement. The dam has an overflow in its center of 30 feet in width,

urved spillway, and the face of the dam, for the width of
llway, is curved both at the top and bottom. The supply
village is taken from the reservoir by a 10-inch pipe, pas-
rough the concrete near the base of the dam, and there
12-inch pipes through the dam for the purpose of empty-
reservoir. Provision is also made for a flood flow over
t in length of the top of the dam, and such flow is then
r the face of the dam for that length. There is some leak-
not to any great extent.

eservoir is rather narrow and long, with a good depth.
ter in the reservoir seems now very clean and pure. It
y a stream of moderate size, with a few branches above
ervoir and with a number of fine flowing springs. The
which forms the water-shed for the streams is hilly, with
rable wood. It is mostly agricultural with farms of
rable extent and with comparatively few dwellings. The
characteristics of the water-shed are very favorable to
ection of a pure water supply. Some outhouses, privies,
and barn-yards are too close to the stream, or have too
onnection with them, but the adoption and enforcement
generally similar to those adopted by the State Board
r localities, with like conditions, will insure freedom from
ination and secure purity of supply.

ublic health law (chapter 661 of the laws of 1893, article
n 70) provides as follows:

State Board of Health may make rules and regulations
protection from contamination of any or all public sup-
potable waters and their sources within the State, and
penalties for the violation thereof or the non-compliance
ith not exceeding $200 for every such violation or non-
nce. Every such rule or regulation shall be published
once in each week for six consecutive weeks in at least
wspaper of the county where the waters to which it re-
e located. The cost of such publication shall be paid by
poration or municipality benefited by the protection of the
upply to which the rule or regulation published relates.

The affidavit of the printer, publisher or proprietor of the newspaper in which such rule or regulation is published may be filed, with the rule or regulation published, in the county clerk's office of such county, and such affidavit and rule and regulation shall be conclusive evidence of such publication, and of all the facts therein stated in all courts and places."

Section 71 of the same law provides for inspection by local board in control of water supply, to ascertain whether the rules of State Board are complied with. Also for service of copy of rules in case of violation. Also for notice to State Board in case of non-compliance with the rules. Also for action by State Board in such cases.

It seems to be the intent of the law that the first thing to be done in such a case as that under consideration is the making of rules and regulations by the State Board for the protection from contamination of public supplies of potable waters and their sources.

The State Board has, in a number of cases, formulated rules under these provisions of law.

In the present case I think the proper course will be that the board make rules as indicated.

Respectfully,

JOHN BOGART,

Consulting Engineer.

Rules and Regulations for the Protection from Contamination of the Public Supply of Potable Waters and Their Sources for the Village of Coxsackie, N. Y.

1. No privy or place for the deposit or storage of human excreta shall be constructed, located or maintained within 50 feet horizontal measurement from the high water mark or precipitous bank of any reservoir, spring, stream, ditch or water course of any kind, the water in which, when running, flows eventually into a reservoir of the public water supply of the village of Coxsackie.

2. No privy vault, pit or cesspool, or non-transportable recep-

acle of any kind for the reception or storage of human excreta, hall be constructed, located or maintained within 250 feet, hori- ontal measurement, from the high water mark or precipitous ank of any reservoir, or within 130 feet, horizontal measurement, om the high water mark or precipitous bank of any spring, ream, ditch or water course, as aforesaid.

3. Every privy or place for the deposit of human excreta which constructed, located or maintained between the aforesaid limits 50 and 250 feet, horizontal measurement, from the high water ark or precipitous bank of any reservoir, or 50 and 130 feet rizontal measurement, from the high water mark or ecipitous bank of any spring, stream, ditch or water course aforesaid, and from which the said excreta is not at once moved automatically, by means of suitable water-tight pipes conduits to some proper place of disposal beyond the maximum oresaid limit, shall be arranged in such manner that all said creta shall be received and temporarily retained in suitable ssels or receptacles, which shall at all times be maintained in absolutely water-tight condition and which will admit of con- nient removal to some place of ultimate disposal beyond the said aximum limit.

4. The excreta collected in the aforesaid removable receptacles all be removed and the receptacles cleansed and deodorized as ten as is necessary to keep the receptacles in proper sanitary ndition and to prevent an overflow of the excreta upon the soil floor of said privy.

5. The excreta so collected shall be removed so as to cause the ast possible nuisance and shall be so disposed of that they can t be washed either over the surface or through the subsoil into y reservoir, spring, stream, ditch or water course of any kind aforesaid, and shall be so placed as not to cause an offensive isance.

6. Whenever it shall be found that, owing to the porous char- ter of the soil, the height and flow of surface and subsoil waters, e steepness of the slopes or other special conditions of the local- y, the excremental matter from any privy, cesspool or other

receptacle for human excreta may be washed over the surface or through the subsoil into a reservoir or any spring, stream, ditch or water course aforesaid, without having been thereby, in the judgment of the State Board of Health, sufficiently purified, then the said privy, cesspool or other receptacle for human excreta shall, after due notice to the owner thereof, be removed to such greater distance from said high water marks as shall be considered safe and proper by the State Board of Health.

House slops, sink waste, laundry water and other similar sewage.

7. No sewage, house slops, sink wastes, water in which milk cans, clothes or bedding have been washed or rinsed, nor any other polluted water or liquid shall be thrown or discharged directly into a reservoir or into any spring, stream, ditch, or water course aforesaid, nor shall any such aforesaid liquid or solid matter or other polluted liquid be thrown or discharged upon the surface of the ground or into the ground below the surface in any manner whereby the same may flow into any reservoir, spring, stream, ditch or water course aforesaid, within 50 feet, horizontal measurement, of the high water mark or precipitous bank of any reservoir, spring, stream, ditch or water course aforesaid.

8. No clothing, animals, vehicles, nor anything which pollutes water shall be washed, nor shall any person bathe in any reservoir, spring, stream, ditch or water course aforesaid nor shall any cattle, horses, sheep, swine or other animals be allowed to enter, wallow or stand in any reservoir, spring, stream, ditch or water course aforesaid.

Garbage and refuse.

9. No garbage or putrescible refuse of any kind shall be thrown or discharged directly into any reservoir, spring, stream, ditch or water course aforesaid, nor shall any such substances be placed upon or below the surface of the ground where they may be washed into any reservoir, spring, stream, ditch or water course aforesaid within 50 feet of the high water mark or precipitous bank thereof.

Manures, composts and similar matter.

10. No stable, pig-sty, hen-house, stableyard, barnyard, hog-yard, duckyard, hitching or standing place for horses or cattle, nor any compost or manure heap nor other place where animal manure accumulates shall be located or maintained within 100 feet of any reservoir, spring, stream, ditch or water course aforesaid. These and also watering places for horses, or cattle or other animals must be so arranged that the polluted drainings therefrom shall not flow into any such reservoirs, springs, streams, ditches or water courses without having undergone proper purification. Such drainings shall not be allowed to flow through open or covered drains within 50 feet of the high water mark or precipitous bank of any reservoir, spring, stream, ditch or water course as aforesaid without having undergone proper purification.

11. No human excreta or compost containing human excreta shall be spread upon the ground within 250 feet of the high water mark or precipitous bank of a reservoir, or within 130 feet of the high water mark or precipitous bank of any stream, spring, ditch or water course aforesaid, and no manures or composts of any kind shall be deposited so as to be washed a less distance than 50 feet over the surface or through the sub-soil into any reservoir, spring, stream, ditch or water course aforesaid, without having undergone proper purification.

Dead animals, vegetable refuse and manufacturing wastes.

12. No dead animal, bird or fish, or part thereof, nor any filthy or impure matter, nor any decayed fruit or vegetable substance, nor any waste products, putrescible matter or polluted waters from any slaughter house, dairy, creamery, cider mill, sawmill or other manufactory shall be thrown or allowed to run into any reservoir, spring, stream, ditch or water course aforesaid, nor shall they be so deposited that any portion thereof or of the pulluted drainage therefrom shall be washed on the surface or less than 50 feet through the subsoil into any reservoir, spring, stream, ditch or water course aforesaid, without having undergone proper purification.

13. No interment of a human body shall be made within 500 feet of the high water mark or precipitous bank of any reservoir, spring, stream, ditch or water course aforesaid.

Management of the reservoirs.

14. The reservoirs of the Coxsackie public water supply shall not be unnecessarily drawn down during the warm months but shall be kept as deep and as nearly at a uniform level as possible, to prevent the pollution of the water with dead organic matter.

15. No filter or screen shall be used when in a filthy condition and liable to pollute the water in the mains, and no filter or screen shall be used at the head of the main which can not be constantly examined and cleaned.

Penalty.

In accordance with section 70 of chapter 661 of the Laws of 1893, a penalty of $50 is hereby imposed upon any corporation, person or persons guilty of a violation of or non-compliance with any of the above given mandatory rules or regulations, to be recovered under the said act.

At a meeting of the State Board of Health held on the 16th day of May, 1895, at the Capitol, Albany, N. Y., the foregoing rules and regulations were made, ordained and established, pursuant to chapter 661 of the Laws of 1893, for the sanitary protection of the reservoirs and tributaries thereto of the water supply of the village of Coxsackie.

FLORENCE O. DONOHUE,
President.

J. F. BARNES,
Secretary and Executive Officer.

SPECIAL REPORTS.

t of the New York State Board of Health's Delegates to ɔnvention of the American Public Health Association, eld in Denver, Col., October 1 to 4, 1895.

President and Commissioners.— Your delegates wish to this board for the honor of representing it at the meeting American Public Health Association, held in Denver, Octo- t to 4th. The meeting was one of great interest and success, every State being represented, as well as a large delegation Mexico, and delegates from New Brunswick, Ontario, Que- ıd Manitoba of the Dominion of Canada.

ving Rochester early September 27th, and arriving in Chi- he 28th, your delegates journeyed westward with delegates embers of the American Public Health Association. Arriv- Davenport, Ia., at 4 p. m., where there was a large number resentative citizens at the station waiting to receive the pro- s of public health. The mayor, city officials and business association of Davenport had provided carriages to drive the ıtes through the business portion of the city, and then to the ive point of their visit, the Davenport Water Works. There ıad an opportunity of viewing the greatest battery of me- ɔal filters that is in operation in the world, and the methods ration were explained and illustrated. President F. H. s, in his address of welcome said: "It is very gratifying to ıvenport Water Company to know that its efforts to furnish ınd wholesome water to the residents of Davenport have ecognized, not only at home, but so far abroad, that so emi- ı body of scientists as the American Public Health Associa- hould have expressed a desire through some of its members, ke a personal examination of its system of filtration." Su- endent Hooper escorted the party of sightseers about the y from which the filters can be viewed to the best advantage.

He explained the methods of filtration, and had one of the filters washed out for the benefit of the visitors. Professor Erastus Smith, who fills the chair of chemistry at Beloit College, Beloit Wis., and who has analyzed samples of unfiltered and filtered river water, sent to him monthly for the past three years by the Davenport Water Company, and has directed the process of filtration in that city, delivered a most valuable address. After discussing the chemical action of the Davenport filters, which he pronounced as nearly perfect as it was possible to make them, he entered a plea for action by the American Public Health Association, upon the important question of the pollution of streams. From a chart prepared from the census returns of the past five decades, he showed that in 1850, there had been 219,068 people drawing their water supply from the Mississippi river. In 1860 the number was increased to 421,283; in 1870, to 694,387; in 1880 to 835,783; and in 1890, to 1,158,912. The importance, therefore, of national regulation, that should prevent the pollution of this great central stream was increasing yearly. The city of Davenport, in common with all the other cities on the Mississippi river, take their water supply from the river, and then do their utmost to pollute the stream by dumping garbage and emptying raw sewage into the river. There is need of national education concerning the necessity of garbage reduction, and sewage disposal works for all cities. Dr. Josiah Hartzell of the Ohio State Board of Health, read a paper at the meeting in Denver, on "The Mississippi river as a Sewer." He produced statistics to show the tremendous quantities of dead animal matter which yearly floated down that great stream, and the consequent danger to public health. He was particularly severe upon Chicago, and the sewer purposes to which it devoted the Chicago river. In Leeds, England, the authorities, on complaint of the residents living below the city, prohibited the town government from using the stream for such purposes, and that must be the ultimate outcome in this country. Just at present, Dr. Hartzell is giving the greatest attention to the purifying of sewer water before it is allowed to run back into the stream. This, he says, is being successfully done at Canton, Ohio, where

ng beds have been made, and the wash from the sewers of the
s settled, and the water rendered harmless before it is allowed
n back into the stream.

ter leaving the water works, and taking a drive around Rock
d, the party repaired to the Masonic Temple, where a half-
s reception was followed by a banquet given by the Business
s association, of Davenport. The occasion will long be re-
bered by all who had the pleasure of enjoying the hospitality
wa's beautiful city.

10.30 p. m., the delegates again started westward, arriving
enver on Monday forenoon, September 30th. On Monday
noon a special train on the South Park carried the delegates
o the Platte Canon as the guests of the Denver Union Water
pany. At Wheatland, teams were in waiting and took the
over to the large filter plant on the main pipe line, and after
on the train up the Canon into the mountains, the party were
taken in wagons to Marston lake to view the sources of sup-
The Denver Union Water Company is a private corporation,
s not controlled by the city. Dr. LaChapelle of Montreal,
" If the city were putting the profit they pay the corporation
he plant, imagine what a complete plant they would eventu-
ave."

e twenty-third regular session of the American Public Health
ciation began on October 1st, and instructive papers were
relating to car sanitation, by S. C. Jordan, of Portland, Me.,
y Dr. Domingo Orvananos, of Mexico, Mex. The latter pre-
d the following measures which might be adopted. First,
hfulness on the part of local authorities to whom pertain
of the railroad stations with large traffic, and with the ob-
f preventing the embarkation of individuals who might trans-
he diseases. Second, The appointment of medical inspectors
e lines, or in the places where it is considered necessary.
d. That the railroad cars should be furnished with cushions
hangings that can be easily taken off and replaced. Fourth.
prohibition, under severe penalties, of expectorating in any
except in cuspidors, of which a sufficient number should be

provided, and which should contain a solution of bi-chloride mercury of 1 to 1000.

The evening session was held in Trinity church, and was an o public meeting. The welcome to Colorado was given by Gover A. W. McIntire. The welcome to Denver by Mayor T. S. McM ray. The annual address of the president of the association by William Bailey, of Louisville, Ky.

October 2d, 3d and 4th, the regular sessions continued. ! reading and discussion of papers which time and space will permit us to enter into in detail in this report. Mention has b made of some of the most practical value, and briefly will enumerate a few others. Dr. H. B. Horlbeck, of Charleston, S. read a paper on "Municipal Stream Disinfection," describin practical apparatus and method for doing it. An interesting pa on "Bacteriological Results from Mechanical Filtration" by Gardner T. Swarts, of Providence, R. I., and lastly, perhaps paper of greatest scientific interest was on "Prophylaxis of Yell Fever," by Dr. Manuel Carnona Valle of Mexico, Mex. The covery which he has made is one which will rank with those Koch and Pasteur. It is a sure and deadly enemy of the terri yellow fever scourge. And after the paper had been read bef such a phlegmatic body as the Health Association, they became thusiastic and arose in numbers to greet the aged discove By the innoculation of a yellow fever sufferer with his urine, disease is stemmed and finally eradicated from the system. 1882, Dr. Carnona Valle began his sub-cutaneous injection of ur from victims of the scourge. He discovered that he could vac ate a sound person with the fluid from a patient who was over f days diseased, and that those undergoing the operation were mured from any further danger of contagion.

Surgeon General Sternberg of the United States Army, who l been in correspondence with the discoverer, proposes that residuum of urine be obtained by evaporation of the liquid i vacuum. It was recommended to the physicians that they use residuum in small flasks, which should be perfectly aseptic

hermetically sealed. Before making an innoculation, Dr. Valle dissolves five centigrammes of residuum in one gramme of pure water, and injects with a Pravaz syringe.

On Friday, October 4th at noon, the association adjourned to Colorado Springs to conclude its session there October 7th on Monday, thereby affording the delegates an opportunity of enjoying some of the delights of Colorado's wonderful mountain scenery, and of breathing the ozone of its purest atmosphere. The association elected Dr. Eduardo Liceaga of Mexico, president for the coming year, and selected Buffalo, N. Y., its next meeting place. We congratulate this State upon securing the next meeting. This was brought about by earnest work on the part of your delegates, and more especially by the effort of Rr. Ernest Wende, health officer of Buffalo, who extended the invitation from the mayor and common council of Buffalo, for the association to meet there. Dr. W. J. Wey, of Elmira and Dr. A. W. Suiter, who are members of the association, were zealous workers for this State. The meeting in Buffalo next year means a larger meeting than heretofore, and from this board will rightfully claim our best contributions to make it a great success.

Respectfully submitted,

DR. S. CASE JONES,
DR. BAXTER T. SMELZER,
Delegates.

TOWN OF WATERLOO.

We, the undersigned, Oliver C. Cone, town clerk of the town of Waterloo, and George H. Hulbert, one of the justices of the peace thereof, duly appointed on the 13th day of July, 1895, a committee to investigate and report to the State Board of Health the condition of the Cayuga and Seneca canal, from the village

of Geneva eastward into the town of Waterloo. We most respectfully report as follows:

That upon investigation we find that in less than one-half mile lying in the town of Geneva, adjoining the town of Waterloo, on the west, there are 18 privies with outlet in Cayuga and Seneca canal, and no other outlet, and that there are now lying in said canal the carcasses of four dead dogs, and there was a carcass of a dead mule, which has been disposed of under the direction of the town board of health of the town of Waterloo. That the water supply of the town of Waterloo is taken from the Cayuga and Seneca canal just west of the village limits, and from Geneva down this water all runs through the Cayuga and Seneca canal and it is badly contaminated and unsafe to be used for culinary purposes. We most respectfully ask that your honorable Board investigate this matter and take proper action without further delay.

Dated WATERLOO, N. Y., *July* 24, 1895.

WATERLOO TOWN BOARD OF HEALTH.
Per OLIVER C. CONE, *Town Clerk.*
GEO. H. HULBERT, *Justice of the Peace.*
Committee.

ALBANY, *October* 23, 1895.

To the State Board of Health of the State of New York:

Gentlemen.— Complaint having been made to the State Board of Health by Mr. Oliver C. Cone, town clerk of Waterloo, Seneca county, N. Y., and accompanied by affidavits of parties living in said town and near where said nuisance exists, the State Board of Health at once notified the board of health of the village of Geneva that they were polluting the water supply of the village and town of Waterloo by permitting a large number of cesspols to drain into the Seneca river and canal. Dr. Rupert, the health officer, sent a prompt response to the State Board that no nuisance now

d as complained of by the town board of Waterloo, in the
n precinct of Geneva. The Waterloo board maintained
he nuisance still existed. The secretary of this board vis-
eneva and met the health officers of the Geneva and Water-
ards. In company with these gentlemen I inspected the
ses and found a few old-fashioned, open cesspools that were
he river and also one connected with the Nester malt house,
is used by a large number of its employes. I at once or-
the removal of those over the river bed, and for the others
ed that sealed boxes should be put in immediately. I found
he complaints made by the town of Waterloo in so far as
ing or poisoning their water supply was absurd, when the
ecame known that the village of Geneva, with its nearly
population, empties most of its sewage in what is known
Seneca river and canal; Waterloo, being only 7 miles dis-
om Geneva, and with the descent that is very slight indeed.
ream is slow and sluggish. Knowing the impossibility of
vater under such conditions, readily explains why the peo-
ing in Waterloo (and those who use this water) suffer from
d fever. The village of Geneva should be obliged to
have disposal works or carry their sewer-pipes farther out
eca lake, which adjoins the southern portion of the town,
ie village of Waterloo, with no very great additional ex-
could have the purest drinking water in the world by ex-
g their pipes through the river and into Seneca lake, as it
rge body of water 40 miles in length and from 2 to 5 miles
th, and of very great depth, fed by living springs.

Your obedient servant,

BAXTER T. SMELZER,

Secretary.

GOOSE CREEK, DUNKIRK, N. Y.

DUNKIRK, N. Y., *May* 28, 1895.

Secretary State Board of Health, Albany, N. Y.:

Dear Sir.— I have a matter of vast importance bearing up the health of the entire community to bring to your attention, a one that I have reason to believe will merit due consideration your hands.

For the past five years the taxpayers of the first ward have be endeavoring to have the local board of health do away with sluice run of filth and nastiness known as Goose creek. The lo board has promised that this should be done, but they have ma no effort in this direction. I now ask you, in behalf of the t payers of this ward, whose families are suffering disease and dea through the negligence of our city officials, to show your auth ity in suppressing this evil.

We patiently suffered until patience has ceased to be a virt and knowing that you are vested with power to overcome t evil, we appeal to you for assistance. Other portions of the c have received recognition from the local board, but this Goo creek, the most intolerable nuisance of all, has been ignor We believe that you will intercede in the interest of health a life. Hoping to receive an early reply, I am yours for the ta payers.

EMUEL WENGE,
No. 88 *East Second street.*

ALBANY, N. Y., *May* 27, 1895.

To Mr. EMUEL WENGE, *No.* 88 *East Second street, Dunkirk, N.* Y

Dear Sir.— Your letter of the 25th instant, complaining of nuisance in your city known as Goose creek, has been received.

In reply, we would state that a copy of your letter has this d been referred to F. S. Jackson, M. D., the health officer of yo

city, with instructions to investigate into the conditions as stated by you and report upon the same to this department.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

ALBANY, *July* 5, 1895.

To Hon. J. E. HEQUEMBOURG, *President Board of Health, Dunkirk, N. Y.:*

Dear Sir.— We are in receipt of complaints at this department concerning an alleged nuisance caused by the condition of Goose creek in your city, which fact it is stated has been repeatedly called to the attention of your board by the health officer, with the result that nothing has as yet been done to remedy the conditions complained of.

It is requested, if nuisances exist on Goose creek which are detrimental to the health of the people of your municipality, that your board take immediate steps to cause their removal, and that you notify this department of the action of the board at an early date.

Very respectfully your obedient servant,

T. A. STUART,
Assistant Secretary.

OFFICE OF BOARD OF HEALTH,
DUNKIRK, N. Y., *July* 8, 1895.

New York State Board of Health, Albany, N. Y.:

Gentlemen.— I am in receipt of your esteemed favor of the 5th inst. advising me of complaints concerning an alleged nuisance caused by the condition of Goose creek in our city, and also that the attention of our local Board of Health has been repeatedly called to this matter, and that nothing has been done to remedy the condition thereof. In reply to same, I have to say as one of the local Board of Health, that you are misadvised as to facts

concerning this matter. Since the organization of our Board of Health more than a year ago, the matter of Goose creek has received more attention than any other case that I at this time can call to mind. In our efforts to abate the nuisance resulting from general drainage into this creek, our board have exhausted their resources to the extent they have been advised by council, they possess. In fact they have gone so far as to consider the building of a system of sewers, charging the cost to the city or property benefited, but have been advised by council, that their power to construct same is questionable. However, our local Board of Health by repeated petition to the common council of our city to provide sewers in this district have at last induced the council to declare their intention to construct a system of sewers which covers the whole territory now drained by Goose creek, and should the system of sewers be constructed, the abatement of the nuisance now complained of growing out of drainage into said creek will be complete.

In a practical application of the health laws with a view of abating nuisances of such character, as the one complained of, we find as a matter of fact that the powers of our board are so restricted or remote that we practically have no way of abating an existing nuisance without creating a greater, as an illustration: We might order and enforce the abatement of the drainage of one of our manufacturing institutions into Goose creek, prior to their obtaining the proper sewerage relief, and for lack of drainage endanger the lives of their employes. Early last year, acting on the order of our local Board of Health, the health officer issued some 104 orders to people along the line of and adjacent to said creek, to cease draining into it forthwith, which order compelled the parties served with such notices, to petition the common council of this city for relief through the construction of a proper system of sewers. The council acting on such petitions, declared their intention to construct a system of sewers, and these same parties, with but few exceptions have remonstrated by petitions to the council against the construction of the sewers, threat-

ning all sorts of legal interference by injunction, etc., if the ouncil adhere to its intention to construct the same. Among he parties remonstrating against the construction of the sewers, am advised, are the parties who are now making complaints to our board.

As this matter has been before us so long, and the attention of our board so often called to it, we will be very much pleased to ave you send here a representative who can advise us as to the owers we have in this matter and which at this time we are unadvised of, that can be used to abate the nuisance now existing in he most speedy and effective manner, if the measures contemplated by our local Board of Health with the co-operation of the common council, do not meet with your approval. We certainly feel that we have taken all possible steps within our power to bring about a satisfactory adjustment of the case, but to this writing, we are in the condition outlined.

Hoping to hear from you on this matter at an early date, I remain,

Yours very truly,

C. E. HEQUEMBOURG,

Mayor and President ex Officio of the Local Board of Health.

NEW YORK, *August* 28, 1895.

Hon. C. W. Adams, State Engineer, Chairman Committee State Board of Health:

Sir.— As requested by you I have visited Dunkirk and present the following report with reference to complaints made as to alleged nuisances in connection with the sewerage and drainage of the city of Dunkirk.

Very respectfully,

JOHN BOGART,

Consulting Engineer.

Report as to the Sewerage and Drainage of the City of Dunkirk as Connected With Alleged Nuisances in Regard to Which Complaint Has Been Made to the State Board of Health.

The city of Dunkirk, Chautauqua county, lies upon the south shore of Lake Erie. It has a population of about 12,000. It is a city of fine residences and of large industrial establishments. Its harbor is in a bar about two miles in width, formed by two bold headlands, Point Gratiot to the west and Battery Point to the east. Within the bay the harbor is about a mile in length and half a mile in width, and is protected by two lines of breakwaters built by the United States Government. These are substantially paralell with the shore, and extend easterly from the western headland. A third breakwater is projected still further east and nearly perpendicular to the line of the existing ones.

The city draws its supply of water for domestic use from Lake Erie through an intake pipe over 4,000 feet long, extending from the shore northwesterly, passing under the breakwater and terminating in a crib in the water of the lake, about 500 feet beyond Point Gratiot.

The water in the harbor is shallow near the shore, wharves running out to accommodate shipping.

The ground on which the city is built rises gradually southward from the lake, but sufficiently to secure good gradients for sewers in all parts of the city. Many of the streets are now provided with sewers. Extensions and additions to the sewer system have been planned and will probably be built within a short time. All existing sewers run directly to the lake shore and discharge upon the beach above the level of the water of the lake. The sewage therefore runs from the end of the sewer upon the sand or mud of the beach till it reaches the water. The distance from the end of the sewer to the water line is from 40 to 150 feet. The result is a deposition of the solid matters from the sewage. These are putrescible and at the time of my visit the beach was filthy, unsightly, very malodorous and on the whole in a condition which I consider to be a nuisance and a menace to the public health.

ıg the water front and at some distance out from the low
where the sewers end there has been constructed a sort
head of timber and plank, apparently for the purpose of
g a defined shore line and protection from the waves in
. I judge that it was intended that filling should be depos-
ıt to this bulkhead, which is locally called the "artificial
e." This filling has not been generally made. The bulk-
s not carried low enought to prevent a wash under it and
›ly much filled material has been carried away gradually
action of the waves.

nall stream, Goose creek, enters the lake not far from the
l part of the city and has a tortuous course toward the south-
unning through private properties and along and across
. At places it is boarded over but generally it is open.
is not a large constant flow of water in it. House wastes
wage from private houses and from large industrial estab-
nts are discharged directly into this creek. Its condition
e subject of complaint to the State Board of Health and led
following notice to the local board of health.

OFFICE NEW YORK STATE BOARD OF HEALTH,
ALBANY, *July* 5, 1895.

N. C. E. HEQUEMBOURG, *President Board of Health, Dunkirk, Y.:*

Sir.— We are in receipt of complaints at this department
ning an alleged nuisance by the condition of Goose creek
r city, which fact it is stated has been repeatedly called to
ention of your board by the health officer, with the result
›thing has as yet been done to remedy the conditions com-
l of.

requested, if nuisances exist on Goose creek which are detri-
to the health of the people of your municipality, that your
take immediate steps to cause their removal, and that you
this department of the action of the board at an early date.

respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

The mayor of Dunkirk replied at once, and as his letter forcibly states the situation I quote it in full:

DUNKIRK, N. Y., *July* 8, 1895.

New York State Board of Health, Albany, N. Y.:

Gentlemen.— I am in receipt of your esteemed favor of the 5th inst., advising me of complaints concerning an alleged nuisance caused by the condition of Goose creek in our city, and also that the attention of our local board of health has been repeatedly called to this matter, and that nothing has been done to remedy the condition thereof, in reply to same, I have to say as one of the local board of health, that you are misadvised as to facts concerning this matter. Since the organization of our board of health more than a year ago, the matter of Goose creek has received more attention than any other case that I at this time can call to mind. In our efforts to abate the nuisance resulting from general drainage into this creek, our board have exhausted their resources to the extent that they have been advised by counsel, they possess. In fact they have gone so far as to consider the building of a system of sewers, charging the cost to the city or property benefited, but have been advised by counsel, that their power to construct same is questionable. However, our local board of health by repeated petition to the common council of our city to provide sewers in this district have at last induced the council to declare their intention to construct a system of sewers which covers the whole territory now drained by Goose creek, and should the system of sewers be constructed, the abatement of the nuisance now complained of, growing out of drainage into said creek will be complete.

In a practical application of the health laws with a view of abating nuisance of such character, as the one complained of, we find as a matter of fact that the powers of our board are so restricted or remote, that we practically have no way of abating an existing nuisance without creating a greater, as an illustration; we might order and enforce the abatement of the drainage of one of our manufacturing institutions into Goose creek, prior to their obtain-

g the proper sewerage relief, and for lack of drainage endanger e lives of their employes. Early last year, acting on the orders our local board of health, the health officer issued some 104 lers to people along the line of and adjacent to said creek to se draining into it forthwith, which order compelled the parties ved with such notices, to petition the common council of this r for relief through the construction of a proper system of ers. The council acting on such petitions, declared their inten- n to construct a system of sewers, and these same parties, with : few exceptions have remonstrated by petitions to the council inst the construction of the sewers, threatening all sorts of al interference by injunction, etc., if the council adhere to its ention to construct the same. Among the parties remonstrat- ; against the construction of the sewers, I am advised, are the rties who are now making complaints to your board.

As this matter has been before us so long, and the attention of ur board so often called to it, we will be very much pleased to ve you send here a representative who can advise us as to the wers we have in this matter, and which at this time we are un- vised of, that can be used to abate the nuisance now existing in e most speedy and effective manner, if the measures contem- ted by our local board of health, with the co-operation of the mmon council, do not meet with your approval, we certainly l that we have taken all pssible steps within our power to bring ut a satisfactory adjustment of the case, but to this writing, we in the condition outlined.

Hoping to hear from you on this matter at an early date, I ain,

Yours very truly,

C. E. HEQUEMBOURG,

Mayor and President Ex-officio of the Local Board of Health.

Thereupon the matter was referred to the committee and my it and inspection followed.

In the meanwhile the local board of health presented to the yor and common council two notices which are as follows:

OFFICE BOARD OF HEALTH,
DUNKIRK, N. Y., *July* 22, 1895.

To the Honorable Mayor and Common Council of the City of Dunkirk:

Gentlemen.— An examination of the lake front and harbor of Dunkirk reveals a condition existing that is appalling when the health of 12,000 people is considered.

The strip of sandy beach lying along the water's edge, from Robin street to Battery point, is nothing less than a foul, ill-smelling and disease-breeding morass, made so by the constant flow of sewage over it, either direct from the sewer mouths or by the surcharged waters of the bay, which continually deposit foul and putrid matter on the beach as they rise and fall. Instead, therefore, of a clean stretch of sand along the lake shore, we have a constant menace to the public health.

The sands, reeking with decaying matter, are continually emitting deadly effluvia and noxious exhalations, which are borne by the winds to all parts of the city. The harbor is but a great, ill-smelling cesspool, floating a mass of indescribable filth, which the action of the waves keeps in constant motion, stirring it up and turning it over, each wave contributing its quota to the obnoxious deposit upon the beach, and contaminating and polluting the air by the ever-present odor. As the current in the bay is sluggish, this foul mess is not carried away when discharged by the sewers but remains to taint and defile. The waters of the bay are impregnated with sewage from beach to breakwater. Around and underneath the docks are sand-bars in which small pools have formed, and into these is carried the filth from the sewers, where it remains to befoul all the surroundings.

The accumulation of decaying animal and vegetable matter is such that I believe that were it stirred up, as in dredging or violent storm, an epidemic of zymotic diseases could scarcely be avoided.

This matter is of sufficient importance for your body to give it proper and careful consideration, and it is, therefore, brought to your attention in this informal way for that purpose.

Sewer Openings.

Beginning at west end, Dove street, open on south line of Front street, runs across beach 40 feet to water and 100 feet from artificial defense.

Swan street opens in middle of Front street, 40 feet to water and 80 feet from artificial defense. Here the sewage has a very obstructed passage through the rubbish that impedes its course.

Eagle street opens 10 feet north of Front street, crosses the beach diagonally 100 fet to the water.

Washington avenue opens in face of sea wall, north line of Water street; winds a tortuous course 150 feet through a solid deposit of sewage matter to water, where formerly there was considerable depth of water.

Elk street opens on south line of Water street, winds its slimy, sluggish and sinuous way 200 feet over rocks, broken down defenses and mire to water.

Private sewer of James Hook and Daniel Scannell, 100 feet over beach near old bed of creek.

Private sewer crosses beach 60 feet west of Deer street.

Deer street opens at south line of Water street, takes a 100-foot route to the lake.

Private sewer in rear of Hyde place, 80 feet to lake.

Private sewer of Louis Heyl, 80 feet to lake.

Lion street opens on south line of Water street, winds its way 100 feet to lake, over slate rock bottom, without much chance for absorption, but standing in many basins unadulterated by less contaminated water of the harbor.

All of which is respectfully submitted.

F. S. JACKSON, M. D.,
Health Officer.

OFFICE OF THE BOARD OF HEALTH,
DUNKIRK, *August* 6, 1895.

To the Mayor and Common Council of the City of Dunkirk, N. Y.:

You will take notice that the city of Dunkirk maintains and is responsible for a public nuisance which is briefly described as follows:

The entire strip of sandy beach and lake front lying along the water's edge of Lake Erie from Robin street to Battery point is a foul, ill-smelling and disease-breeding morass, which is caused by the constant flow of sewage matter from the public sewers in the various streets of the city of Dunkirk over and upon said beach and into the waters of the bay. The sand composing the beach reeks with decaying matter, and continually emits deadly effluvia and noxious exhalations, which are carried by the winds to all parts of the city. The harbor is a cesspool and a floating mass of indescribable filth. The current of water in the bay is too sluggish to carry away the sewage matter so deposited by these sewers, and such matter remains upon the beach and in the low waters adjacent thereto. The waters of the bay are impregnated with the sewage from the beach to the breakwater, and around and underneath the docks are sand bars in which small pools are formed, and into these is carried all the filth of the sewers where the same remains.

You are further notified that the maintenance of said nuisance and the allowing of it to exist by your honorable body is a violation of section 1 of the sanitary regulations of the city of Dunkirk, N. Y., adopted by the board of health, which regulations are in full force and effect, and you are further notified that said nuisance is a menace to the public health and of extreme danger to the life and health of the entire community; that the existence of said nuisance renders the air borne by the winds over this beach and bay impure and unwholesome to the entire city, and particularly to that portion of inhabitants residing next to and adjacent to the lake front.

You are further notified that you are hereby required and directed, within ten days from the date of the service of this notice upon you, to abate the foregoing described nuisance, and that in default of your so doing the same will be abated by the board of health of the city of Dunkirk, and the expense thereof collected from the city of Dunkirk according to law.

By order of the board of health.

F. S. JACKSON, M. D.,
Health Officer.

· complication which exists is stated in the letter of the
·, above quoted. It may be summarized as follows:
:h sewage and household wastes are now discharged into a
· sluggish stream, Goose creek, which flows through the city
nkirk in a tortuous course of about a mile, along and across
s and through private property. The introduction of
:e into this stream is wrong, and creates a dangerous con-
, which will become detrimental to the public health.
only proper remedy is the construction of a system of sew-
ıich will provide an outlet for the sewage of all the property
t part of the city.
ns have been made for such a system. They, however, pro-
or a discharge of the sewage upon the shore of the lake, as
· other sewers of the city now discharge.
· addition of this discharge upon the beach will inevitably
vate a condition along that shore, already very unsanitary,
ıental to the public health, and a nuisance.
· remedy is to revise the system of sewer discharge. This
· done. An intercepting sewer, of proper capacity, should
d substantially parallel to and not far from the lake shore.
ewer should be extended to a point where it will discharge
ıe lake so far from the city as to obviate the danger of pol-
to the shore adjacent to the residence and business por-
of the city. The outlet arrangements may well be so de-
l as to provide for the introduction, in the future, of works
rifying the effluent. Probably the outlet could be placed in
ighborhood of Battery point, which is far from the intake
water supply.
'ill be observed that the suppression of two nuisances is re-
l, viz., discharge of sewage into Goose creek; discharge of
e upon the harbor shore.
ion by the city authorities is required in each of these nui-
. It is required in the interest of the public health of the

notice authorized by section 25 of the public health law
en already given by the State Board of Health as to one of

these nuisances, and the local board has served notices upon the city authorities as to both the nuisances. (See documents quoted above.) If private parties, owners or occupants of premises, could suppress or remove the nuisances, then the action outlined in section 26 of the public health law would apply. But as this is a case where the action necessary to suppress the nuisances must be taken by the municipal authorities, it seems to come under the provisions of section 6 of that law.

In my opinion the mayor and common council of the city of Dunkirk should be notified that the State Board of Health has made an examination into the nuisances and questions affecting the security of life and health in the city of Dunkirk; that it finds that in two respects public nuisances exist in that city, namely:

First. The discharge of sewage effluent from the sewers of the city upon the shores of the harbor.

Second. The discharge of sewage and house wastes into Goose creek.

That it also finds that these nuisances may be abated and removed by—

First. The construction of an intercepting sewer, discharging at a proper point.

Second. The construction of sewers in such of the city streets as may be required to provide for the sewage and house wastes now entering or which in the future might enter Goose creek.

That it advises the municipal authorities of the city of Dunkirk that these constructions should be entered upon at once. That, unless this is done, the State Board of Health will take the further course provided by law of reporting to the Governor the results of the examination, for such action as the Governor may direct.

Respectfully,

JOHN BOGART,

Consulting Engineer.

OFFICE OF CITY CLERK CITY HALL,
DUNKIRK, N. Y., *August* 28, 1895.

Hon. BAXTER SMELZER, *Secretary and Superintendent, State Board of Health, Albany N. Y.:*

Sir.— Mayor Hequembourg requests me to advise you that since the visit to this city of Hon. John Bogart, consulting engineer, State Board of Health, and an examination made by him of the nuisance along lake front, etc., the following action upon the matter has been taken by the local Board of Health.

Health Officer F. S. Jackson, M. D., condemned the aforesaid lake front and the waters of the bay as a public nuisance and a menace to the public health, and on his complaint a notice was served personally upon the mayor, and each member of the common council of this city, of which the following is a copy:

BOARD OF HEALTH CITY OF DUNKIRK.

Notice of a Hearing Before this Board:

In the case of the complaint and order concerning a public nuisance along the lake front and beach of Lake Erie within the city of Dunkirk from Robin street to Battery Point, and within the harbor, which is maintained by the city of Dunkirk and for which it is responsible.

To the Mayor and Common Council of the City of Dunkirk:

TAKE NOTICE:

That a complaint having been made to this board alleging that a public nuisance exists in the harbor adjacent to the city of Dunkirk and along the beach and lake front of Lake Erie within said city from Robin street, to Battery Point, which is maintained by you and for which your are responsible, which is caused by the constant flow of sewage matter from the public sewers in the various streets in the city of Dunkirk, which are maintained by said city, over and upon said beach and into the waters of said bay, and harbor, and you having failed to abate the said nuisance pursuant to a notice and direction of the health officer of this board heretofore given you,

You are now hereby notified, that a hearing concerning the matter above referred to will be given by this board of health at a meeting thereof to be held at its office in the city hall of the city of Dunkirk, on the 19th day of August, 1895, at 8 o'clock p. m., of that day, at which hearing you are hereby cited to appear, to show cause why the said alleged nuisance as above described should not be condemned as a nuisance and a menace to the public health and why the said board of health should not proceed to abate the same and assess the cost and expense thereof to the city of Dunkirk, as provided by chapter 661 of the Laws of 1893, which is the public health law of this State, and also to show cause why you should not be prosecuted for maintaining said nuisance.

You will also take notice that by maintaining the foregoing nuisance you are violating the sanitary regulations of the city of Dunkirk, adopted by the board of health and liable to the penalties imposed thereby.

By order of the Board of Health of the city of Dunkirk, N. Y.

J. R. JAMES,
Secretary.

Dated at Dunkirk, N. Y., this 16th day of August, 1895.

As ordered by the aforesaid notice the local Board of Health met on Monday evening, August 19, 1895, at which meeting the persons cited to appear were present and represented by counsel.

After a hearing on the matter the nuisance as alleged was admitted by the defendents, and a resolution of which the following is a copy was adopted by the Board:

Resolved, That the entire strip of beach and lake front of Lake Erie, within the city of Dunkirk, from Robin street to Battery Point, together with the adjacent waters thereto of the harbor and bay, and the outlet of the various public sewers in the public streets of said city, emptying upon said beach and into said harbor and bay, are hereby declared and condemned by this Board of Health to be a nuisance of menace and danger to the public health

of the inhabitants of the said city of Dunkirk, the existence and maintenance of which is in violation of the sanitary rules and regulations of this board, and which renders the air borne by the winds from said beach, sewer outlets and bay and the waters of said bay, impure, unhealthy and unwholsome, to the entire city and dangerous to the health of the inhabitants thereof, which said public nuisance is caused, maintained and allowed to exist by "the city of Dunkirk," and its mayor and common council permitting and allowing the sewage matter from the said city of Dunkirk to flow through the public sewers of said city, and out upon said beach and lake front and into the waters of said harbor and bay, in an improper, unhealthy and unwholsome manner and without properly caring for and disposing of the same; and be it further

Resolved, That this Board of Health of the city of Dunkirk hereby orders and directs that the said "the city of Dunkirk" and the said mayor and common council, abate and suppress the foregoing nuisance within ten days from the date of the service of a copy of this order, and resolution, and failing such action and in default thereof, does hereby direct the health officer as the executive officer of this board to enter upon said premises and abate the said nuisance and place said premises in such a proper sanitary condition as to insure their being of no danger to the public health and charge the cost and expense thereof to the said "city of Dunkirk," and also to proceed with the prosecution of the said "the city of Dunkirk" and its mayor and common council for a violation of this order, and of the various rules and regulations of this board and of the statutes in such case made and provided and also to proceed to collect therefrom the penalties imposed by said rules and regulations; and be it further

Resolved, That the secretary of this board be and he is hereby directed to serve forthwith, upon the said "the city of Dunkirk" and its mayor and common council, copies of the foregoing resolution and order of this board."

On Tuesday, August 20, 1895, a copy of the aforesaid resolution adopted by the Board of Health on August 19, 1895, was served

upon the mayor and each member of the common council of this city personally, as follows:

Board of Health, City of Dunkirk, N. Y.:

In the matter of the nuisance existing along the entire strip of beach and lake front of Lake Erie within the city of Dunkirk from Robin street to Battery Point together with the adjacent waters thereto of the harbor and bay and the outlets of the various sewers in the public streets of said city, emptying upon said beach and into said harbor and bay.

To.....

of the City of Dunkirk, N. Y.

You will please take notice that at a meeting of the Board of Health of the city of Dunkirk, held at its office in city hall on the 19th day of August, 1895, at 8 o'clock p. m., of that day, a resolution was adopted of which the following is a true and correct copy to wit:

Resolved, That the entire strip of beach and lake front of Lake Erie within the city of Dunkirk from Robin street to Battery Point together with the adjacent waters thereof of the harbor and bay, and the outlets of all the various sewers in the public streets of said city, emptying upon said beach and into said harbor and bay, are hereby declared and condemned by this Board of Health to be a nuisance of menace and danger to the public health of the inhabitants of the said city of Dunkirk, the existence and maintenance of which is in violation of the sanitary rules and regulations of this board, and which renders the air borne by the winds from said beach, sewer outlets and bay, and the waters of said bay, impure, unhealthy and unwholsome to the entire public and dangerous to the health of the inhabitants thereof; which said public nuisance is caused, maintained and allowed to exist by "the city of Dunkirk," and its mayor and common council permitting and allowing the sewage matter from the said city of Dunkirk to flow through the public sewers of said city and out upon said beach and lake front and into the waters of said harbor

and bay, in an improper, unhealthy and unwholesome manner and without properly caring for and disposing of the same; and be it further

Resolved, That this Board of Health of the city of Dunkirk hereby orders and directs that the said "the city of Dunkirk" and the said mayor and common council to abate and suppress the foregoing nuisance within ten days from the date of the service of a copy of this order and resolution, and failing such action and in default thereof, does hereby direct the health officer as the executive officer of this board to enter upon said premises and abate the said nuisance and place said premises in such a proper sanitary condition as to insure there being of no danger to the public health, and charge the cost and expense thereof to the said "the city of Dunkirk" and its mayor and common council for a violation of this order, and to proceed with the prosecution of the said "the city of Dunkirk" for violation of the various general rules and regulations of this board and the statutes in such case made and provided and also to proceed to collect therefrom the penalties imposed by said rules and regulations; and be it further

Resolved, That the secretary of this board be and he hereby is directed to serve forthwith, upon the said "the city of Dunkirk" and its mayor and common council, copies of the foregoing resolution and order of this board.

Dated at Dunkirk, N. Y., this 20th day of August, 1895.

J. R. JAMES,
Secretary.

A copy of the above notice was also read at the regular meeting of the common council held Tuesday evening, August 20, 1895, and on motion same was received and ordered filed.

At the aforesaid meeting a resolution was adopted as follows: "That the street commissioner of the city of Dunkirk be and he is hereby directed by this common council to proceed at once and to employ such men as will be necessary for that purpose to excavate trenches from the mouth of all sewers emptying into Lake Erie within the limits of the city of Dunkirk in such a man-

ner that the sewage flowing therefrom may flow to the best possible advantage from the mouth of such sewers, into the lake; and to further remove as far as possible all offal, dirt and other refuse matter along the beach and lake front within the limits of said city, and to render sanitary as far as possible, the said sewer openings, beach and lake front; and be it further

Resolved, That the city clerk be and is hereby directed to forthwith serve upon the health officer of the city of Dunkirk, a copy of the aforesaid resolution as indicating the disposition and desire of the common council of the city of Dunkirk to comply as far as it is in its power with the order of said Board of Health made and served upon the city of Dunkirk, the mayor and its common council with reference to the foregoing nuisance this day.

The following resolution was offered:

Resolved, That the city engineer of the city of Dunkirk is hereby ordered and directed to forthwith prepare and furnish this council such plans and specifications as to him seems least expensive and most feasible for the doing of such work as will abate the lake front nuisance caused by the drainage of the public sewers of the city of Dunkirk out upon the lake beach and into the waters of the bay together with his opinion with reference thereto.

Amendment made that the matter be laid on the table.

The mayor addressed the council as follows:

I would like to say to the common council, that the resolution offered by the councilman from the Third is of such nature that if this council desires in any manner to consider the order of the Board of Health to take measures to abate the nuisance declared by them to exist, that their action taken upon this resolution will either exonerate or hold them responsible to the health laws of this State, and as mayor of the city, I desire to place myself upon record by saying that the resolution as offered by Councilman Roberts, is of such a nature, that I deem it absolutely essential that it be passed, and that the resolution as offered by the chairman of the committee on sewers, without this portion, is evasive and is not responsive in any way to the order of the Board of Health.

The amendement that the matter be laid on the table, and the iginal resolution were then put, and both declared lost.

At a meeting of the common council held Thursday evening, ugust 22, 1895, a resolution of which the following is a copy was opted:

"*Resolved*, That the city engineer of the city of Dunkirk be, and is hereby ordered, to forthwith prepare and furnish this com- on council such plans and specifications as to him may seem least pensive and most feasible for the doing of such work as will ate the lake front nuisance caused by the drainage of the public wers of the city of Dunkirk with his opinion with reference ereto."

In conclusion, the mayor desires me to advise that he would e an immediate decision on this matter by your board, and such order made by you as will speedily effect the abatement of the veral nuisances complained of, viz.: Crooked brook, Goose eek, Douglass creek, and the lake front nuisance, caused by the inage of the public sewers along and across the lake front and to the waters of the bay.

Kindly advise at an early date as possible of the order your ard will make that will cause the abatement of the several isances before referred to, as the public works in our city are w at a standstill awaiting the action of your board.

Yours respectfully,

JOHN F. MALONEY,
City Clerk.

ALBANY, *November* 12, 1895.

MR. JOHN F. MALONEY, *City Clerk, Dunkirk, N. Y.:*

Dear Sir.—At a meeting of the State Board of Health held Octo- r 29, 1895, the following resolution was adopted:

Resolved, That the drainage committee make a further examina- n of the situation in the city of Dunkirk, and that due and suffi- nt notice be given to the authorities of the city and the public the time when such examination shall be made, in order that

all sides may be heard; pending the further report of this committee that no action shall be taken by this board with reference to carrying out the conclusions of the Consulting Engineer.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

Report of the Drainage Committee in the Matter of Alleged Nuisances Caused by the Sewers in the City of Dunkirk, N. Y.

ALBANY, *December* 12, 1895.

To the State Board of Health:

Gentlemen.— In the matter of the alleged nuisance, created by the sewers of Dunkirk, N. Y., which has heretofore been referred to the committee on drainage, that committee would respectfully report:

On November 22, 1895, after due notice given to Mayor Hequembourg and the board of health of the city of Dunkirk, the committee proceeded to that city and gave a hearing in the city hall.

The committee listened to the statement of Mayor Hequembourg, in which he gave a succinct history of the situation of sewage matters in Dunkirk; bringing out the facts that several sewers of diameter, ranging from 30 inches to 15 inches, discharge through streets terminating at the shore line of the lake or harbor, on the beach, and while the water is at low stage, thus permitting the lodging of sewage matter on the beach.

He also showed that a portion of the city now discharges its sewage and drain pipes into Goose creek, and that the local board of health had exercised its authority and notified property owners to cease such sewage discharge into Goose creek.

He also showed that a contention had arisen in the council as to the best location for a sewer to relieve this situation, and pending this action, the Brooks Locomotive Works had constructed a sewer at their own expense from their works to the harbor or lake shore.

The mayor also expressed his judgment that the true relief could only be obtained by constructing an intercepting sewer,

which would cut off the existing sewers and provide for future sewers, carrying their discharge to a point along the shore distant from the city and near the limits of the harbor.

The committee also listened to the views of citizens, authorized to speak for the people, by a public meeting held for the purpose, as well as the views of Mr. L. F. Stearns, city attorney.

None of these gentlement had anything to say contrary to the statement of facts made by his honor the mayor, but they most strenuously disputed the conclusions that the conditions were especially unhealthy, or that the water in the harbor remained in an impure condition, but advanced the argument that the flow of the water in Lake Erie eastward, renewed the waters of the harbor continually, and that all the action necessary was to extend these sewers out from the shore line to a point where they would discharge into deeper water.

With several interested parties, the committee visited the points of discharge of the several sewers, and observed for themselves the conditions.

The committee is aware of the report of the Consulting Engineer, Mr. Bogart, and believes with him, that an intercepting sewer, would be a solution of the trouble, and there are no engineering difficulties which could not be met and overcome in its construction.

After mature consideration of all the circumstances, the committee is of the opinion that the sewers now discharging into the harbor, can be led into one or more outlet pipes, which should be constructed of iron with tight joints, and extended from the shore line to water not less than five (5) or six (6) feet deep; that the Brooks Locomotive Works sewer should also be extended to deep water; that a sewer should be constructed to take the sewage, now discharging into Goose creek, either discharging into the locomotive works sewer, or by a separate line, to deep water in the harbor.

The cost of this would be quite within the means of the city to build, while the cost of the intercepting sewer, proposed would be a burden, which should not be imposed so long as a reasonable relief may be obtained by other means.

Your committee is of the opinion that if all the sewage of the city be thus conducted into deep water, that the nuisance now created by these sewers will be practically removed, and the committee does not accept the views of the opponents of this method of treatment that the waters of the harbor will be seriously contaminated, but inclined to the belief that the natural current of the water eastward in Lake Erie will effect a continual change of the waters in the harbor.

In conclusion, the committee finds that the nuisance alleged to exist in the city of Dunkirk, created by the discharge of sewage matter on the beach of the harbor particularly in front of the city is very apparent and should be abated at as early a day as practicable, and recommends as a means to this end, the construction of one or more iron pipe outlet sewers which will take the discharge of the present sewers into the water of the harbor where it is five (5) or six (6) feet deep, and that the mayor and common council and board of health of the city of Dunkirk be required to take the necessary action to carry into effect the remedy suggested.

Accompanying our report are the stenographer's minutes of the hearing at Dunkirk with four maps which are:

A map showing part of the contaminated portion of Goose creek

Copy of map showing the system of sewers last authorized to be constructed in the first and fourth wards by the common council

Copy of government map from the survey of 1895.

A map of the city of Dunkirk showing the localities where contagious diseases have most prevailed as exhibited to the committee by the health officer during his remarks.

Respectfully,

C. W. ADAMS,
MURRAY M. ADAMS,
Committee on Drainage.

› the Possible Infection of Oysters With Typhoid · Other Disease Germs in the Process of Preparing r Market, by Dr. F. C. Curtis.

ALBANY, N. Y., *March* 8, 1895.

Board of Health:

r as to the possible infection of oysters with typhoid ›r disease germs in the process of preparing them for brought to the attention of the Board at its meeting 25, 1895, by the following letter from the President of ›ion of Fisheries:

OFFICE COMMISSION OF FISHERIES,

›ur maps referring to city unkirk will be found under rate cover.

President.

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t of the Oyster Protector referred to and transmitted :

NEW YORK CITY, N. Y., *December* 27, 1894.

NGTON, Esq., *President Commission of Fisheries, State York:*

—Answering yours of 17th instant, the Connecticut hoid fever attributed to eating oysters is said to be

due to the fact that the oysters in question were placed t "freshen" in the immediate vicinity of a sewer outlet. This ex ceedingly reprehensible act I believe to be without its parallel i the history of oyster culture. It has unjustly resulted in grea injury to the oyster industry. If a quantity of ice, fruit, mea breadstuff or other articles of food were in a similarly careles manner subjected to contact with poisonous substances it woul not argue that the entire output of aforesaid commodities woul be unfit for food, nor should it be so held against oysters in ge eral.

The fact that immense quantities of oysters from the oyste regions of this State and vicinity are, without ill effect, eate (uncooked) daily must be accepted as a triumphant vindication i behalf of our luscious bivalves. The "floating" and "freshe ing" of oysters is about ended for the season. With the appea ance of ice in our streams, soon to be expected, the few remainin oyster floats now in use will be relegated to winter quarters.

To avoid any question as to the possibility of contagion, th "freshening" of oysters at Mill Creek, S. I., should be prohibite in future.

A supplemental report will be submitted to the end that th assurance of no contamination in the "freshening" of oyster shall be made doubly sure.

I know of no instance where oysters are now being "freshened' in this State in the manner alleged to have been done in Connec ticut.

Next season the location of oyster floats will be particularly ob served and reported.

Yours very respectfully,

JOSEPH W. MERSEREAU,

State Oyster Protector, New York State.

Supplemental Report to Special Report of December 27, 1894, Relating to "Freshening" Oysters in New York State.

It has been the practice for many years on the Atlantic seaboard when "taking up" oysters from their beds in salt water, to first "lay them out," "float" or "freshen" them for market, i. e., by placing them on the bottom of certain shallow streams, or, in accordance with the method of recent years, putting them in receptacles called "floats," which are moored in water fresher than that from which the oysters were taken.

They are usually subjected to contact with "brackish" or fresh water for one or two tides, or until they have taken one or two good "drinks." If the weather is warm, they frequently "drink" immediately. In cold weather they may not take in fresh water for twelve hours or longer. The flavor of most oysters is undoubtedly improved by judicious floating. This effect is particularly noticeable if the oysters in question are of a bitter sea salt flavor, which becomes greatly modified by floating.

The absorption of fresh water also improves their appearance, as it causes them to appear "plump," or, as commonly said, it "flattens" them.

Oysters, after being "floated," bear transportation better in the shell than if shipped directly from their salt-water beds.

If oysters are "opened" and shipped in their own liquor, they will ferment and spoil sooner than when their juices have been strained out and the meats washed in fresh water.

The salter the oyster the more fresh water it absorbs. One gallon of "opened" oysters, with their juices strained out, will take in a pint of water in about twelve hours. A like quantity has been known to absorb a pint of water in three hours.

When "opened," washed and placed in tubs or other receptacles before shipment, fresh water being added, the meats will absorb water and increase in bulk and weight about from one-eighth to one-fifth of the original amount. The improvement in flavor, plumpness of appearance and increase in weight is about the same, whether placed in fresh water before or after being "opened."

A bushel of "good, fat oysters" will yield about five quarts of solid meat. If "freshened" or "fattened" by the absorption of fresh water they will yield about six quarts of solid meat to the bushel.

In respect to "floating" oysters, Professor W. O. Atwater says * * * * "When thus treated, the body of the animal takes up water and parts with some of its salts; and small quantities of the nutritive ingredients escape at the same time. The oysters thus become more plump, and increase considerably in bulk and weight. But the quantity of nutritive material, so far from increasing, suffers a slight loss." * * * * "But many people prefer the flavor of floated oysters, and since they buy them more for their flavor than for the nutriment, doubtless very few customers would complain if they understood all the facts. And considering that the practice is very general, and the prices are regulated by free competition, the watering of oysters by floating them in the shell, perhaps, ought not to be called fraudulent." * * * * "The floating of oysters is, therefore, not a process of fattening, but of watering."

The practice of "freshening" oysters will undoubtedly continue, because, as hereinbefore shown, it is advantageous to their appearance, flavor and shipment.

The matter of locality and method of "freshening" oysters remains to be considered. In "olden times," with but a sparse population in proximity to the oyster regions, most of our streams afforded opportunties to obtain the necessary commingling of fresh and salt water for "freshening" oysters without the contamination of sewage or other deleterious matter.

Now, the conditions are exactly reversed. It must, therefore, be apparent to even a casual observer that a change as to localities and possibly as to the methods of "freshening" oysters must ultimately be determined upon.

Without assuming to direct the future action of oystermen as to the conduct of their business, I would respectfully suggest that such localities bordering upon salt water should be selected to "freshen" oysters as would be free from contamination.

Oyster "floats" or receptacles placed there should be so constructed as to receive from faucets, valves or inlets the necessary quantity of salt water from below the surface thereof, so as to avoid contamination from drifting, oily refuse or other deleterious substance. Then, by utilizing fresh-water supply pipes, a sufficient quantity of fresh water could be let in the "floats" so as to acquire the proper density or requisite admixture of salt and fresh water as would induce the oysters to "drink."

Possibly the above system could be conveniently reversed, i. e., by adding saline matter to fresh water until the necessary "brackiness" be obtained.

A system of steam pipes, or other heating apparatus, might also be arranged so as to counteract the low temperature of the water in aforesaid receptacles in winter.

The system above suggested would seem to meet the public demand for "freshened" oysters without the likelihood of the oysters absorbing contaminated water.

Oysters sold in New York markets, of course, come from various points. Suitable and convenient localities for "freshening" oysters are selected by the oyster operators. They may be in this State, Connecticut, New Jersey or elsewhere. Wherever located, however, they should be, and can be, free from contamination. This fact should be established for the benefit of the oyster industry and for the satisfaction of the authorities and consumers at large.

Yours very respectfully,

JOSEPH W. MERSEREAU,

State Oyster Protector, New York State.

Submitted *January* 2, 1895.

To L. D. HUNTINGTON, Esq.,

President Commissioners of Fisheries, New York State.

The procedure followed in oyster culture is indicated in this report and the conditions involved I have learned more in detail from a personal interview with these gentlemen. The oyster is

cultivated on suitably prepared beds in coves along the sea-coast of this State, all along the south side of Long Island, in ocean water, where they reach maturity after three years growth. Dredged from these beds, it has come to be the custom of recent time to place them for from 12 to 20 hours in brackish water, that is water, fresher than ocean water, for the purpose of improving their size, appearance, flavor and shipping qualities, as explained by Mr. Mersereau in his report. Very probably they are also rendered more digestible by this floating, as it is called. The process can not be prolonged, since oysters will not live long in such water, but only so long that they will open their shells and absorb some of this water. The usual method is to put them into floats with slatted bottom and ends which are moored at a point where the water becomes brackish.

The places selected for this floating have usually been in some shallow fresh water stream near the point of its discharge into the ocean.

The question arises as to whether a risk is involved, in this procedure, of rendering oysters unwholesome or in any way unfit for food. The only direction in which such risk can arise is, I think, their exposure to contact with organic animal filth, such as could occur from the defilement of the stream by sewage or factory waste.

There can be no doubt but that the oysters thus placed in a stream receiving sewage under the conditions ordinarily pursued, are directly exposed to contact with sewage matter, at least during ebb tide. They are put there for the purpose of having them acted upon by the fresh water and are left there until they open their shells and imbibe from it. Whatever the water contains is consequently to some extent received by them.

The most conspicuous noxious element that sewage may possibly contain is that of typhoid fever material. On general principles, it might be expected that their infection with these germs would be effected if such germs existed in the sewage material, and that they would thereby convey the disease for the reason that oysters are an article of food frequently eaten uncooked.

We very well know that typhoid fever is in the large majority of cases taken by drinking water which contains its germs, and likewise by milk whch has been similarly infected, and with equal facility by any article of food not exposed to sterilizing heat in the process of cooking. There are few kinds of food that are commonly eaten without cooking, but there is no reason why any food eaten raw that has been defiled by typhoid fever excreta should not carry the disease. I can see no reason, on general principles, why this should not be the case with oysters. As to the effect of salt water on typhoid fever germs it has been found that they retain their vitality in it for a considerable length of time, even in a concentrated solution. We are not left to simple hypothesis, however, in regard to this, since we have a recent example of it in the outbreak of typhoid fever at the Wesleyan University, at Middletown, Connecticut, last October. An investigation of this by the Connecticut State Board of Health, an elaborate report of which by so trustworthy an investigator as Dr. H. W. Conn, was published in the Medical Record for December 15th, leaves no room for doubt that in this case oysters which had been treated in the manner indicated were the carriers of the disease by reason of the entry into the stream within three hundred feet of the point where they were deposited, of a private sewer from a house where typhoid fever existed.

Diarrhoeal diseases might in like manner be conveyed; cholera certainly could in the rare chance of its existence; and possibly other diseased conditions. It is in any case not fit that any food should be exposed to contact with filth of this sort. I should say then that, as a general fact, the freshening of oysters in a sewage-bearing stream is an unsafe procedure, detrimental to the public health, and to be prohibited.

In one of his communications to this board the State Oyster Protector, Mr. Mersereau, specifies Mill Creek, at Port Richmond, Staten Island as a stream in which the freshening of oysters is done. Concerning this stream I learn from him that it is a tortuous creek, of small size, in proximity to which there is a considerable population along its course. Certain private sewers enter it within

800 feet of the point used for depositing the oysters, and above this point there is a large amount of sewage passing into the stream. I have not learned that there is any other point in this State where the process of freshening oysters is carried on under similarly suspicious conditions; but it seems evident that there is one place where in the process of preparation of this article of food it is liable to contamination. I would recommend therefore, that further use of this stream for this purpose be prohibited. While I do not learn that there are other streams under suspicion it would appear that a general prohibition of the use of all sewage bearing streams would be justifiable and in the interest of public health. I have no doubt at the same time that it would be in the oysterman's interest if such a regulation were made and enforced.

The question further arises what to do regarding oysters brought to our markets that have been treated under suspicious conditions outside of this State. State Oyster Protector Mersereau suggests that this would come under the same category as the sale of diseased meat, fish or other deleterious food products; he adds that many thousands of bushels of oysters that are sold in our markets are freshened at Rahway river, N. J., which stream receives the sewage from the city of Rahway. There is no way, I believe, to distinguish oysters thus treated after they reach the market, and I see no means of remedying it other than determining at its source the possibility of deleterious exposure and making regulations there, and this can be done apparently only by concert of action on the part of health authorities in neighboring states.

I have asked the officers of the Commissioners of Fisheries whether it is practicable to freshen oysters in any other way than that commonly used, by placing them in slatted floats moored in the ebb and flow water at the mouth of streams. To this Mr. Mersereau gives the following reply, taken from a letter addressed to President Huntington, of whom I made my inquiry:

* * * In reply to inquiry of recent date, inclosing letter from State Board of Health of New York, I have to say: That, possibly if rock salt or other saline matter in solution be added to a

n quantity of *fresh* water from hydrant, or spring water,
ank it *might* be so proportioned as to induce oysters to
when placed therein. I know of no instance, however,
it has been tried.

question of cost, convenience, and general practicability
ng fresh water, " salted " v. salt water, "' freshened," must
ermined by experiment.

ters can be, and are now, in some localities " freshened "
ely outside of running fresh water streams) by supplying
nt, well water or spring water, as the case may be, by means
es. I am informed that the practice of " freshening " oysters
walk, Conn., by the Norwalk Oyster Company, is as follows:
it oyster bin say about 30 feet long, 10 feet wide, and two feet
s moored at such locality in salt water as will run dry at low
; the oysters placed in said bin are subjected to an admix-
f fresh and salt water in the following manner, i. e., a plug
ioved from the bottom of the floating bin for a sufficient
o allow salt water to enter, at the same time a proper quan-
f fresh water is supplied from a pipe.

en the tide recedes and the oyster bin rests upon the bot-
he plug is again withdrawn and the water is allowed to es-
rom the bin.

Edward Thompson, of Northport, Long Island, also uses a
water supply pipe to " freshen " his oysters, that are placed
the bottom of the stream, under a pier, the sides and ends
inclosure being slatted. The fresh water is discharged
he unconfined tide water covering the oysters placed as
aid.

ny devices are in use to " freshen ' oysters, see Professor J.
der on " Floats for the so-called fattening of oysters," in a
to Professor Baird, United States Commissioner Fish and
ries.

usual method of floating oysters in this and adjacent states,
oring floats with slatted bottom and ends, in brackish water
haps the most effectual and least expensive system in vogue.

Structures serving similar purposes are in use in Chincoteague Bay and vicinity. It is said that Mr. Conger, of Franklin City, Md., has adopted a method of warming the water in winter, by a system of steam pipes running underneath the wooden inclosure surrounding the "fattening" or "plumping" float. * * *

I further inquired as to whether there is any probability that oysters may be contaminated in the oyster beds by the entry of sewage into them — to which the reply is, that there is not, since these beds are not located in the vicinity of sewer outlets, but many miles away from the city in clear sea water. The question of contamination only comes in connection with freshening them in improper places after removal from their beds.

My conclusions from the inquiry I have made is that oysters should not be freshened in sewage bearing streams, at least unless by some satisfactory device by which the sewage polluted water is excluded from the floats in which they are placed; and that similar action should be secured in other states from which this article of food comes to our people.

Very respectfully,

F. C. CURTIS.

TOWN OF SODUS.

To the President of the State Board of Health:

Dear Sir.— At the request of the board of health of the town of Sodus, I submit for your opinion a copy of the report of the health officer of said board, and ask that you instruct us as to what course to pursue in the premises. The complainant is a mill-owner at Sodus Centre. He has a saw and grist mill upon the stream in question. For many years they were operated wholly by water, but laterally the grist mill has had steam works for the dry season. Attached to the mill is a pond covering 8 or 10 acres. This, in the summer season, is nearly stagnant—as the saw mill is not run after the spring freshets are over, and the grist mill *is run* by steam. Into this pond the sewer in question enters, and

this dam is supposed to hinder the free passage of the water. It hardly seems possible that the drawing of the water from this pond during the summer would be conducive to the public health, yet I think this is what the health officer means when he talks about a more perfect "outlet" for the waters of the creek. This could only be done with great loss to the owner, and as it has been there for over three-quarters of a century, it would seem very hard to take any action against it now.

The board of health of the town desires to do its duty in the matter, and refers the matter to the State Board for instructions.

Please let me hear from you at your earliest convenience, as the board adjourned to the 11th instant, at which time I desire to lay your report before it.

Very respectfully,

J. A. BOYD,

Supervisor Town of Sodus.

WALLINGTON, *April* 3, 1895.

To the Board of Health of the Town of Sodus:

Gentlemen.— At the request of Supervisor John A. Boyd I have, during the past few weeks, made diligent inquiry in reference to a sewer lately constructed by E. B. Mather at Sodus Centre.

I find that the sewer proper commenced at the residence of Mrs. Morley, situate on the south side of the street running east towards the school-house, crosses the street and then receives the drainage from the residence of E. B. Mather, on the north side of the highway, and running some distance farther north, finally enters into Salmon creek as it flows past the north line of Mr. Mather's property. I also find that he has laid a pipe from a spring, some 80 rods south of the Morley residence, entering the upper end of the sewer, for the purpose of washing away and preventing any accumulation in the sewer proper.

I also find that for years past the inhabitants living near Salmon creek, at Sodus Centre, have emptied their garbage, rotten apples, night soil and other impurities into said creek.

I also find privies located so near the back of a pond at Sodus Centre (into which said Salmon creek empties) that the filth therefrom is either emptied directly into said pond or washed into it by every rain storm that moistens the surface.

I also find that Salmon creek receives a good deal of drainage from cesspools, barn-yards and out-houses for miles along its banks, and that in its course it runs through a swamp permeated with decaying vegetables of every description.

The want of a perfectly free outlet for the water of the creek, which would otherwise drain this swamp, readily accounts for the attacks of miasmatic diseases so frequently noticed in this section of the town.

I should recommend to procure, if possible, a free outlet through Salmon creek to the waters of Lake Ontario for the debris, sewerage and drainage of the lands contiguous to its banks, as furnishing the surest and best method of counteracting the disastrous results arising from their confinement in cesspools, or being permitted to penetrate the soil and infect the veins of water which underlie its surface, and thus contaminate the only sources of supply for household purposes via. our wells and springs, and I fail to see how the sewerage from the two residences can materially add to the danger which, if any, already exist in a stream fed by hundreds of sewers charged with the very same ingredients. Would not the very fact of this addition heighten the necessity for a more perfect outlet for the waters of the creek in question?

W. G. HINKELL,
Health Physician.

ALBANY, *April* 25, 1895.

Hon. CAMPBELL W. ADAMS, *State Engineer and Surveyor, Chairman Drainage Committee, State Board of Health:*

Sir.— In accordance with instructions received relative to the communication of John A. Boyd, of the town of Sodus, in the county of Wayne, in the matter of an alleged nuisance at Sodus Centre, in said town, I would respectfully submit the following *report:*

The complainant in the case is a mill owner at Sodus Centre, who alleges that the discharge of a drain into the mill pond at that place, from the premises of E. B. Mather, is a damage to the mill property and detrimental to the public health. I recently made a careful examination of the premises in question, interviewed many persons living at Sodus Centre and at other points along Salmon creek, and ascertained many facts that confirm the report of the local health officer, Dr. Thirkell, which report is returned herewith. The mill pond in question is formed by damming the waters of Salmon creek, and has an area of 8 or 10 acres, and the drain complained of empties into the said pond near the upper end thereof, and discharges therein the kitchen sink drainage of two houses with that of a water-closet in one of them. Into and through the same drain is discharged the water of an excellent spring that furnishes at this time, and from what I can learn, at all times, a quantity of water sufficient to not only keep the drain thoroughly flushed, but at the same time to so highly dilute the small quantity of sewage therein at to render its discharge into the pond perfectly harmless. There are several other sources of slight contamination about the pond and along the creek above it, to which the drain in question contributes a portion infinitely small, but the quantity of sewage from all sources combined is not such as would render the waters of the pond or the creek below it a menace to the public health in even the slightest degree at the present stage of the water, which appears to be about normal for this season of the year. Should any danger arise, however, in dryer seasons of the year, the local authorities have ample power to remedy the evil. The whole trouble seems to have proceeded from a personal misunderstanding between two prominent citizens of the town of Sodus, so prominent, indeed, as to cause a probable desire on the part of some of the members of the local board of health to shift the responsibility of a decision in the matter on the State Board.

In view of the facts elicited, I would most respectfully recommend:

First. That the local authorities be advised that in the opinion of the Board no necessity exists for interference in the matter by your honorable body.

Second. That if the discharge of the drain into the pond is a damage to the property of the mill owner, Coleman, he has a remedy in a private suit for damages.

Third. Should any nuisance or danger to the public health arise from the discharge of the said drain at any lower stages of the water of the creek or pond, the local board has ample power to abate the nuisance or cause the removal of the source of danger.

Your attention is called to the fact that the entire property affected is located in the town of Sodus, and wholly within the jurisdiction of the local board of health.

The communication of Supervisor Boyd and the report of Health Officer Thirkell are returned herewith.

Respectfully submitted,

M. SCHENCK,
Consulting Engineer.

ALBANY, N. Y., *April* 30, 1895.

To W. G. THIRKELL, M. D., *Health Officer, Town of Sodus, P. O., Sodus, N. Y.:*

Dear Sir.— I transmit herewith, in compliance with instructions given at a meeting of the State Board of Health, held on April 26, 1895, a copy of the report made by Martin Schenck, Consulting Engineer, after examination of an alleged nuisance at Sodus Centre.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

BINGHAMTON.

Requests a Sanitary Engineer Sent to Binghamton to Advise With the Authorities Concerning Nuisances Caused by Emptying of Sewers Into the Chenango and Susquehanna Rivers.

BINGHAMTON, *July* 13, 1895.

To the State Board of Health, Albany, N. Y.:

Gentlemen.— Many of our citizens are considerably exercised on account of the condition of the two rivers, especially the Chenango, owing to the fact that numerous private and a few public sewers discharge therein. Propositions for damming the river, for building trunk line sewers, etc., etc., are very much in evidence, and numerous opinions prevail. The common council will, on Monday evening, be asked to pass a resolution for the construction of a sewer which will afford only partial relief. The time is quite ripe for action, and I am especially anxious that action be taken, not only to afford temporary, but positive and permanent relief. If your honorably body could send a sanitary engineer or competent expert here to carefully review the situation, and at once, the favor would be gratefully appreciated, and such action as might be based upon conclusions arrived at by such expert opinion would not only prove advantageous to the sanitary and healthful condition of this community in the future, but would quickly and effectually arrest the vague but most annoying suspicions of people directly and indirectly interested. Can your possibly and consistently send a proper representative here on Monday next, July 15th? He could leave Albany at 10 o'clock, a. m., arriving at 2.50 p. m., or at 4.20 p. m., arriving at 9.05 p. m. Would much prefer that he come by first train. Please telegraph me, and if he comes will meet him on arrival of train.

Yours truly,

GEORGE E. GREEN,

Mayor.

Report as to Removal of Sewage from Chenango River, Binghamton, N. Y.

JOHN BOGART, CIVIL ENGINEER, NEW YORK, *August* 2, 1895.

Hon. C. W. ADAMS, *State Engineer, Chairman Drainage Committee, State Board of Health:*

Sir.— In the matter of the communication of the Honorable George E. Green, Mayor of the city of Binghamton, with reference to certain questions connected with the sewerage of that city, I beg to report that I have visited Binghamton with you and met the mayor, the city engineer, Mr. S. E. Monroe, and have heard statements made by a number of the citizens living in the neighborhood of the localities under consideration, and in other parts of the city.

The city of Binghamton had a population in 1890 of 35,005, and I am informed that at present it has about 40,000. The Susquehanna river passes through the city from the east toward the west and the Chenango river from the north toward the south, the junction of the two rivers being within the city limits. The more compactly built parts of the city are north of the Susquehanna river on both sides of the Chenango, but the city extends for a considerable distance along the south side of the Susquehanna. Only parts of the city have as yet been provided with sewerage and some sewers are now under construction. The State Hospital for the Insane is in the extreme eastern part of the city and sewerage from this institution is conveyed by a conduit of considerable size through the city to an outlet in the Chenango river about 1,000 feet above the junction of that river with the Susquehanna. This sewer was built, I understand, jointly by the city of Binghamton and the State, and it takes the sewage of a considerable part of the city in addition to that from the hospital. There are other sewers on each side of the Chenango and of the Susquehanna, with separate outlets directly into those rivers. At present at least four different sets of sewers empty into the Chenango river and in addition a considerable number of private sewers empty into that river along its course through the city. There are

ral sewage outlets into the Susquehanna river between
e dam and the mouth of the Chenango, and one sewage
to the Susquehanna below the Chenango.

was prepared by a sanitary engineer, I think in 1882, a
lan for the sewerage of the whole city, but this plan has
en executed nor followed, except in some instances.
eem to have been constructed in different parts of the
reference to the immediate wants of neighborhoods. It
of great advantage to have made, immediately, a thor-
l careful study of the existing sewers and to have a gen-
prepared for an extension of a system of sewers which
rve every section of the city, so that all work hereafter
uld be in conformity with such adopted plan and avoid
and inconvenience which must result from the construc-
ewers independent of each other, and not in conformity
rfect system.

rticular question of which the mayor requests considera-
hether it is better to make such provision at once as will
or the delivery of all, or substantially all, the sewage into
uehanna river, and thus free the Chenango from any in-
wage.

henango river is a stream of considerable variation of
onsequence both of the ordinary effects of flood and dry
nd also in consequence of the use of the water for mill-
oses, there being a dam across the river within the city
e water from the pond thus made being used for mills
e city and the flow, in dry seasons, being retained during
s to make up for the water drawn from the pond by the
ing the day. There is also considerable variation in the
water in the river in its course through the city, at some
ere being shoals upon which the water is very shallow
y seasons. At other parts of the river there is a fairly
th, even at low water. A number of the sewer outlets
l with houses along both banks of the river empty above
of low water and the outflow is unsightly and without
times obnoxious. The city engineer suggests that the

amount of water passing down the Chenango is of sufficient volume, even in times of low flow, to secure a dilution of the sewage to an extent that will prevent any probability of seriously unhealthy results. He also suggests that the construction of sewers in streets gives better opportunity for frequent inspection than would be the case if the sewer conduit were laid along the bank of the river or on the bottom of the river. He also suggests that special protection in the latter case would have to be made to avoid damage from floods and from ice.

The sewers thus far built take both house sewage and storm water. They are provided with overflows at the points where they connect with the river outlets, so that storm water may have ample separate provision for outflow in time of rainfall, while ordinary flow of sewage is provided for by iron pipes conducted into the water of the river.

While the suggestions of the city engineer are, in my opinion, certainly made from the conviction that they provide the best solution for each particular case, and while there is much weight to be given to the points indicated above, as to the desirability of sewers being built in the streets rather than along the bank or upon the bottom of the river, yet on the other hand, the permanent exclusion of sewage from the Chenango river is desirable, not only from considerations of a sanitary nature, but also because it will then free this beautiful city from the visible injection of filthy matter into the river, and also from the suggestion of pollution. While this is, in one sense, a sentimental consideration, it is not more sentimental than is the desire to beautify the streets and public places and public and private buildings and grounds of the city.

I judge, and I believe the city engineer also thinks, that all the sewage from the Ferry street bridge to the Susquehanna river could be conveyed into a conduit to be built near the river edge and that with this conduit, both the public and private sewers not otherwise provided for could be connected. This conduit would be on the west side of the river. I understand also that all the sewage from the east side of the river could be conveyed under

streets, either to the State asylum sewer or to the Susquehanna river, and this should at once be done.

There is one exception to this statement, namely; that the outlet of a small system of sewerage is now above the dam at Noyes' island. While it would be better if this particular sewage could be conducted through the general system and brought to the Susquehanna river; yet the amount of it I understand will always be small and possibly, therefore, the dilution will be so great as to render unnecessary the expense of such provision for it.

The outlet of the sewer from the hospital should be continued to a point in the Susquehanna river where there is ample flow. As this sewer conveys sewage from the properties both of the city and of the State I suppose that an equitable arrangement would be provided by the legislature for the cost of this important extension.

The conduit to be provided along the west bank of the Chenango should be continued so that its outlet is into the water of the Susquehanna river where the flow is ample to continuously take care of it, and it should be large enough to take all sewage that may in future be brought to it from north of Ferry street.

It is proper to add that these recommendations, as will be seen, refer particularly to the question of the treatment of the sewage which now, or in the future, would enter the Chenango river, unless the provision suggested be made for conveying all of it into the Susquehanna. This report must not be considered as endeavoring to suggest what should be the general treatment of the sewage of this great city. A study of that question would be of interest, and I think ought to be made before much more construction is entered upon.

I return herewith the communications from the mayor of Binghamton.

Very respectfully,

JOHN BOGART,

Consulting Engineer.

ALBANY, *October* 1, 1895.

Hon. GEO. E. GREEN, *Mayor City of Binghamton Binghamton, N. Y.:*

Dear Sir.— I transit herewith, a copy of the report of John Bogart, consulting engineer of this board, on his examination of the nuisances complained of, and caused by the emptying of sewage into the Chenango river.

This report was approved at a meeting of the State Board of Health held on September 18, 1895, with instructions to request the authorities of Binghamton to carry out such suggestions as are made, as promptly as practicable.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

MOUNT VERNON.

Report Concerning the Discharge of Sewage by the City of Mount Vernon Into Westchester Creek, by Hon. C. W. Adams.

ALBANY, *July* 26, 1895.

To the State Board of Health:

Gentlemen.— At a meeting of the board, held at the Murray Hill hotel some months ago, complaints were heard in the matter of the nuisances alleged to be caused by the city of Mount Vernon discharging its sewage into the Westchester creek. The board finally referred the matter for further consideration to the drainage committee.

The committee desires to report that on June 11th, a visit was made to Mount Vernon, and the sewer outlet into Westchester creek was examined.

At the date of this visit, we found the surroundings of this outlet and the condition of this creek to be quite different from a similar inspection made in 1894, by the committee. Then the creek was a small winding channel, of such a limited depth at low

as to be almost dry and every indication of the deposit of age on its banks.

t our last visit we found that the United States Government carried on the excavation for the deepening and widening of creek pursuant to its plans, so that it now presents totally erent conditions. We find that the sewer outlet discharges a body of water very largely in excess of the stream into ch it formerly discharged, and at low tide about two feet of er is still in the creek with a width of perhaps 50 feet.

he United States Government is still at work on this creek, the volume of water will be increased when the work is shed.

n my judgment, the new condition of things at the outlet er will largely remove the causes of complaint heretofore sting.

Ve examined several manholes on the outlet sewer at points ow where the sewers are entered by the polluted water from the works and readily detected the smell produced by such pol-d water. We visited the gas works and found in process of struction, a pump house and a series of vats, which when shed will be used as settling tanks or vats into which this same charge from the gas works will be led.

he superintendent of the gas company distinctly stated that works would be finished in a short time and then all connec-is with the sewer would be cut off and the by-products will nceforth be emptied into these vats or separators, the water ified and used over by the company. The surplus water is to pumped on to the surface of the land owned by the company he vicinity. Assuredly when this is completed, and there was ry evidence of such an early result, the sewers would no longer permeated with any gas, and another cause of complaint will removed.

By an act of the Legislature of 1895, a commission has been ointed to investigate the project of building intercepting ers along the Bronx river. This commission has organized is considering the subject. Possibly its report may recom-

mend the building of such intecepting sewers, and if so, then the sewage which Mount Vernon now discharges openly into the Bronx river, could be carried off by this intercepting sewer and this cause of complaint removed.

Pending the results of this Bronx river sewer commission, it would be an unwise expenditure by the city of Mount Vernon, and the State Board of Health would not be justified in forcing, to the extent of its authority, the city of Mount Vernon to expend the money necessary to build a pumping plant or tunnel, or both, by which this Bronx river outlet pipe would be carried into the Westchester creek, and, further, if such intercepting sewer materializes, it would be practicable to carry nearly all the sewage, which now discharges into the outlet in Westchester creek by means of a tunnel into this intercepting sewer.

Respectfully submitted,

C. W. ADAMS,

Chairman Drainage Committee.

De Veaux College, Suspension Bridge, N. Y.

BUFFALO, N. Y., *January* 21, 1895.

To the Honorable, the Board of Health of the State of New York:

We, the undersigned, a committee of the trustees of De Veaux College, an educational institution located at Suspension Bridge, (now included in the city of Niagara Falls, N. Y.), and being empowered by the full board in this matter, would respectfully report:

That for the past two years there have been cases of typhoid fever at De Veaux College, and the board of trustees, in making every effort to secure the sanitary condition of the institution, has devoted much time and money to an effort to eradicate this evil. That about a year ago, upon the invitation of the board, Dr. Ernest Wende, health commissioner of the city of Buffalo, accompanied by his staff, made a careful examination of the condition of the college buildings, the supply of water, milk, etc., and reported to us that the buildings were in perfect sanitary *condition, and* that any cases of typhoid fever that were caused

at the college must have been caused by the water supply, which is taken from the water mains of the old village of Suspension Bridge (now a part of the city of Niagara Falls), which water mains draw their supply of water from the hydraulic canal, so called, at Niagara Falls.

That, by recommendation of Health Commissioner Wende, arrangements for the use of filtered rain-water were made, at considerable expense to the board, for all drinking and culinary purposes.

That within the past thirty days there has been a recurrence of typhoid fever at the institution, and, upon the request of the board, the board of health of the city of Niagara Falls made an investigation of the premises and filed a report with the city authorities of Niagara Falls, a copy of which said report is hereto attached and marked "A." That Mr. Dean Wilson, inspector of plumbing, attached to the health department of Buffalo, also made an examination of the premises at the same time as the board of health of Niagara Falls, and, upon their request and employment, and made the report, a copy of which is hereto attached and marked "B."

That the board has been informed by Dr. J. C. Clark, of Niagara Falls, who is the house physician at De Veaux College, that cases of typhoid fever now at the college must have been caused by the city water supply, which is still used at the college for certain purposes, and which it is almost impossible to prevent the students from using. They have access to it, and, in spite of instructions and the fact that filtered rain water is supplied by the institution, are believed to make use of the city water.

From the same source we learn that there are numerous cases of typhoid fever throughout the whole city of Niagara Falls, and, owing to the conflict of opinions of the various local authorities who have made these examinations, and the desire of the board to secure the health of the students at the college, we have concluded to respectfully request your board to make a careful examination of the sanitary condition of De Veaux College and the water supply (including a bacteriological examination) at Niagara

Falls, to the end that we may be informed of the causes of the recurrence of typhoid fever at the institution which is in our care, and to the end that such steps may be taken that any further recurrence of this evil may be avoided.

Yours very respectfully,

HERBERT P. BISSELL,
Chairman, 284 Main street, Buffalo, N. Y.
JOHN S. MACKLEM,
SPALDING EVANS,
Committee.

"A."

Dr. Meehan, of the committee appointed at a special meeting Saturday evening last to inspect the sanitary condition of De Veaux to ascertain the cause or causes of the several outbreaks of typhoid fever in that institution, reported as follows:

To the Board of Health:

Gentlemen.— Having, in accordance with your request, inspected the sanitary conditions of De Veaux premises, and carefully considered, so far as discoverable, the various factors in the causation of the alleged sickness in said institution, we respectfully submit the following report:

1st. Typhoid fever has not, in the judgment of the committee, prevailed among the De Veaux students during the past year to any extraordinary or alarming extent.

2d. The recurrence of the disease at the institution has not, so far as we can ascertain, been due to the use of drinking water, but has, in all probability, been caused by infected premises, having resulted from inefficient disinfection of the excreta from patients who have suffered from the fever while within the precincts of the institution, as the alvine dejections of the sick are, beyond question, the medium by which typhoid fever is usually communicated to others, the matter of thorough and effective

lisinfection of the dejecta becomes a matter of paramount im-
ortance in any well calculated measures to stamp out the disease.

The above facts, viewed in connection with the persistent re-
urrence of the fever at the institution, we believe, warrant the
ıference that the several outbreaks of the disease among the
ıdets were chargeable to the air they breathed and not to the
ater they drank, the local atmosphere having presumably be-
›me contaminated by infected emanations from a sewer or vault
hich had previously become the receptacle of undisinfected or
ıperfectly disinfected excrement from a typhoid patient.

The above explanation, we believe, affords the most reasonable
ıd satisfactory solution of the fever problem at De Veaux, and
.e committee therefore recommends that the sewer system of
e Veaux be thoroughly disinfected.

The committee recommends also that a seriously defective privy
rface vault situated on the premises in close proximity to the
ıilding be abolished or properly reconstructed and connected
th the sewer.

By acting in accordance with the above recommendations we
lieve that the trustees of De Veaux can secure satisfactory
ıitary conditions in said institution with a reasonable expec-
ion that in the future her cadets may not be assailed by typhoid
'er in greater numbers than are the students of other similar
titutions in which the greater proportion of the inmates are
the eligible age to contract the fever upon slight exposure to
: causes — typhoid being eminently a disease of adolescence,
›osing the great majority of its victims between the ages of 15
1 25 years.

A noteworthy feature to be observed in regard to the existence
typhoid fever in this city is found in the last annual report of
: State Board of Health, recently received by the city health
cer, in which report it is shown that the death rate from ty-
›id fever in this city is among the lowest in the State, many
ies having two and three times as great a death rate as Niagara
lls.

Last year's report, from the same authoritative source, showed this city to have the lowest death rate of any in the State.

Respectfully submitted,

JAMES M. MEEHAN, M. D.,
Health Officer.

W. H. HODGE, M. D.,
Committee.

Dated *January* 10, 1895.

Plumbing Inspector Burke, of the same committee, reported on the condition of the plumbing as follows:

NIAGARA FALLS, N. Y., *January* 10, 1895.

To the Board of Health:

Gentlemen.— Having inspected the plumbing at De Veaux, as per your instructions, I have the honor to report as follows:

1. The trap in the surface drain leading from the coal cellar should be brought inside the cellar wall, and the fresh air inlet carried outside.

2. The back air pipes from the closet and bath tub in the toilet room over the kitchen should be brought up above the fixtures, as they do not conform with the city rules on the subject.

3. The trap in the pipe that carries off the waste water from the kitchen floor, should be replaced with a two-inch trap, as it has not enough water seal, and it also has a large hole in it on the sewer side.

4. I find that nearly all back air pipes in the building leading from the fixtures are not tight. This allows sewer gas to come into the building, and should be remedied.

5. The two fresh air inlets outside the bathroom window, and the one near the kitchen, should be moved at least 15 feet away from any door or window.

6. The back air pipes from the kitchen sink should be fixed immediately.

7. I find that in the laundry there is a set of three tubs with no traps under any of them. They should be trapped and the traps properly vented.

8. The trap in the surface drain should be brought inside of the undry.

9. The conductor pipes should be trapped at the bottom of every e of them. I also notice that they terminate in every instance hin 5 and 6 feet of windows. When the windows are left open ummer this would cause sewer gas to go into the rooms.

WM. V. BURKE,
Plumbing Inspector.

n motion of Mr. Sticker, the above reports of the physicians of the plumbing inspector were received and approved and ies of the same ordered transmitted to De Veaux authorities. Ir. Kline moved that the De Veaux authorities be notified to edy the defective plumbing mentioned in plumbing inspector ke's report, also to thoroughly clean and disinfect the open face vaults on the premises and discontinue the same. Carried.

"B."

INALD H. COE, Esq., *President De Veaux College, Niagara Falls, N. Y.:*

ear Sir.— In justice to your institution and after the careful mination of the same, I wish to state that the condition of the nises are fairly above the average with institutions of like racter located in this city (Buffalo), barring a few changes ch I recommend.

our institution is justly entitled to a certificate as to sanitary ditions of the building as regards the system of plumbing and inage. If any cess pool, cistern or privy vaults unused or erwise are upon the premises they should at once be cleaned thoroughly disinfected and the use of the same discontinued. ould also state, that in my opinion, typhoid's entrance to the itution was through either the water, milk or ice supply and through your excellent system of plumbing and drainage. A

thorough bacteriological examination of aforesaid water, milk and ice might probably throw more light upon the matter.

Yours respectfully,

DEAN WILSON,

Inspector of Plumbing, Buffalo Health Department.

Report on the Sanitary Condition of De Veaux College, Niagara Falls, April 2, 1895, by F. C. Curtis, M. D.

To the State Board of Health:

A committee of the board of trustees of De Veaux College reported, some time since, that cases of typhoid fever had occurred in that institution for years past and on account of it there had been much care taken to improve its sanitary condition, under the advice of competent men, without checking the recurrence of the disease. The recent development of fresh cases led to a request that the board of health of Niagara Falls investigate the premises, which was done, and a copy of the report of the health officer and inspector of plumbing thereon sent, which was to the effect that there had been no extraordinary prevalence of typhoid fever among the students during the past year, and that its recurrence had been due, in their estimation, not to the use of drinking water but to imperfect management and sanitary conditions, several of which were detailed.

The committee of the board of trustees further report that about a year ago the health officer and inspector of plumbing of Buffalo had by request investigated the condition of the institution, the water, milk and ice supply, and had reported favorably on its sanitary condition and recommended the use of filtered rain water for drinking and culinary purposes, having concluded that cases of typhoid fever occurring had been caused by the public water supply, the occasional use of which latter, however, it had been impossible to prevent.

In reply to this communication it was suggested from this office that a detailed report of the investigation of Dr. Ernest Wende,

fficer of Buffalo, and of Mr. Dean Wilson, inspector of
g and drainage of that city, be sent to this office, with
ticism on the report of the local health authorities; and
t samples of the suspected water be submitted for analysis.
s done, the report of Dr. Wende being in effect that in
ion the public water supply of the institution, judging
exposure to contamination and from chemical analysis,
it for use and that the sanitary condition of the building
h as not to be responsible for the propagation of sickness,
t certain improvements were to be recommended. Mr.
s report, made after a recent second visit, consisted of a
endation of improvements to be made in the plumbing,
g among them those made by Mr. Burke, the local inspec-
umbing.

t to De Veaux College with Dr. Barnes, secretary of this
pril 2d, to learn the present condition of the institution.
e accompanied by Dr. J. H. Meehan, health officer of
Falls, plumbing inspector Burke, and members of the
rd of health.

stitution is one of thirty-eight years existence, located on
ground adjacent to the banks of Niagara river two miles
he falls, at the point of the Whirlpool rapids, and just
he present city limits of Niagara Falls. It has extended
reaching from the street to the river and one principal
, occupied for class-rooms, dormitories, dining-rooms,
and offices all under one roof, with stable, laundry and
thouses. It accommodates between 60 and 80 students
12 and 19 years of age, preparing them for college, and is
y school. The building was erected in 1857, three stories
e upper floor being used for sleeping apartments, and
o plumbing fixtures save slop sinks in the halls.

eginald H. Coe, president, has been connected with the
r six years. As to the health history he says that a year
e were two cases of scarlet fever. Of typhoid fever there
ase during the first winter he was here, another in the
nd every year since three or four cases have occurred.

Boys who had been inmates for some time were taken. In November last a boy was taken with typhoid fever and in December two boys and the matron, and in January a servant who had been nursing a case out side. None of these remained more than a few days in the school, according to the usual custom being sent to their homes in the vicinity. Discharges were disinfected while they remained. Several scholars were withdrawn because of the occurrence of these cases. There was also diarrhoeal disease during the winter; otherwise the health of the inmates has been good and at present there is no sickness. A filter through which all the water coming into the house passed was put in four years ago, and last year appliances for filtered rain water, but the public supply though prohibited was probably to some extent still used. A Pasteur filter has been put in this winter and all the water used is boiled as well. Ice used is from Silver lake and the Niagara river. Milk is from their own farm, where there has been no sickness. The sewerage has been made modern within six year and every suggestion of competent counsel complied with. In regard to the recent suggestions, of which I had a detailed copy, made by plumbing inspectors Wilson of Buffalo, and Burke of the local board of health, we made investigation, with Mr. Burke who was with us, and were satisfied that they had been attended to, and the present sanitary condition of the institution in respect to plumbing and drainage can be reported as good.

It appears that the occurrence of typhoid fever during the past season has not been phenomenal; a similar number of cases have occurred there in the fall and spring for years past. They developed among boys who had been in the school right along — not fresh arrivals.

We find, however, that De Veaux College is not alone in respect to the occurrence of typhoid fever, for it has existed to a proportionate degree in the entire community. During the past three months there have been 44 cases reported from Niagara Falls and in the past year there were 14 deaths, which is at the rate of 88 deaths annually per 100,000 population. In Buffalo during 1894, in the course of which there was an unusual epidemic there, 193

leaths occurred, or 65 per 100,000 population annually. In 1893 he death-rate of Niagara Falls from this cause was 40 per 100,000 and of Buffalo, 37. I am further told by Dr. J. C. Clark, who is physician to the college, and also by Dr. Campbell, of Niagara Falls, who have been long in practice there, that for the past fifteen years there has been no year of freedom from it, though formerly it was a rare disease. It is safe to say then that De Veaux College only participates in a general condition and gets at least no more than its legitimate share.

The causation of typhoid fever is undoubtedly complex; but no one I think will question this proposition that it is an exception for it to persist in a locality having an uncontaminated water supply. Niagara Falls is divided into two parts, each having a separate supply. To one water is pumped directly from the current of Niagara river two miles above the falls; the other gets its water from the so-called hydraulic canal, formerly supplying the village of Suspension Bridge before its incorporation in the city. It is from this canal that the water supply of De Veaux College is taken.

As to this canal, it consists of a broad slip, admitting water from the river, about three-fourths of a mile long and terminating in a dead end, having no current except such as is caused by drawing off water for power purposes to several concerns mostly near its terminus. The cutting through which it runs is made in porous rock and its course is through a thickly populated section, so that it is exposed to contamination, and it is altogether probable that organic waste finds its way into the water.

As to the chemical analysis four samples taken from the house supply were examined in January, 1894, by Prof. H. M. Hill, of the University of Buffalo, the reports of which have been sent to us. They show, as he notes, an amount of albuminoid ammonia almost twice what should be in a safe drinking water; also a high amount of chlorine. An analysis made by Dr. W. G. Tucker, analyst for the State Board of Health, in February, 1895, shows a much smaller quantity of albuminoid ammonia, though the pro-

portion of chlorine remains high, but he reports it from his analysis as not entirely satisfactory but of fairly good quality.

It may be a question whether the sewage of Buffalo entering the river twenty miles above, the current probably reaching Niagara Falls in four or five hours, may not extend to Niagara Falls. It has been noted that the mortality of six deaths from typhoid fever in the latter place in 1893 increased to fourteen in 1894, during which year an epidemic prevailed in Buffalo.

At any rate it may be reported, in conclusion, that the present sanitary condition of De Veaux College is satisfactory, and that typhoid fever which has developed there has not been greater than that of the community in which it is situated.

Respectfully submitted,

F. C. CURTIS.

DEPARTMENT OF HEALTH,
OFFICE HEALTH COMMISSIONER,
BUFFALO, N. Y., *January* 30, 1894.

To the Board of Trustees, De Veaux College, Niagara Falls, N. Y.:

Gentlemen.— In accordance with your request, I have the honor to submit the following report upon the sanitary condition of De Veaux College:

Chemical examination of the water supplied to the institution shows it to be unfit for use for drinking purposes, being contaminated by sewage, it containing, both in filtered and unfiltered specimens, almost twice the amount of albuminoid ammonia compatible with safety. Reports of the analysis in detail by Prof. H. M. Hill are herewith inclosed.

The purification for drinking purposes of organically polluted water by any method is not to be recommended, and until some other source of supply is made available, rain water may be collected, filtered and used with perfect security.

While the water is undoubtedly unfit for drinking purposes where collected, much additional contamination is received in its transit through the so-called hydraulic canal, which receives the percolation adjacent to it, and which, owing to the rocky and

impervious nature of the subsoil, is considerable in quantity and deleterious in character.

The contents of a number of privy vaults and certain house drains which are delivered into it, and its exposed course through a thickly populated section, makes it additionally the receptacle of much casual and accidental pollution in the nature of household refuse and the like.

A careful investigation was also made into the other most likely source of trouble, viz., the milk supply.

Investigation demonstrated that the cows from which the milk was obtained were properly fed, healthy and in good condition; that the stables were sanitary; the cans, pans and other receptacles properly kept, and that the water supply used for the herd and cleaning purposes was well cared for (rain water).

The other likely source of infection, the sanitary arrangement of the building, plumbing, etc., was thoroughly looked into, and while found to be good, and, beyond doubt, in no way responsible for any disease, certain improvements in the methods of drainage are recommended, to make security as absolute as with our present knowledge we can. I have, therefore, to inclose herewith the report and recommendations of our chief inspector of plumbing and drainage, Mr. Dean Wilson, who accompanied me over the ground, and desire to say that they are entitled to your fullest confidence and careful consideration.

This report is submitted after careful thought upon the matter and consideration of the various factors of the case, not only by myself, but by Prof. Hill, of the University of Buffalo, and Dr. Herbert U. Williams, bacteriologist for the department of health.

We would most urgently recommend that the attention of the local or State authorities be at once called to the state of affairs now existing and have the water supply of the entire city looked into.

Yours most respectfully,

ERNEST WENDE,

Health Commissioner.

DEPARTMENT OF HEALTH,
OFFICE HEALTH COMMISSIONER,
BUFFALO, N. Y., *February* 19, 1895.

Dr. ERNEST WENDE, *Health Commissioner, Buffalo, N. Y.:*

Dear Doctor.— I submitted my original report of De Veaux College January 30, 1894.

On my last visit in January, 1895, I found as much of the report as related to man-holes to be built in main sewer had been done.

The report made by Mr. Burke, of Niagara Falls, to this department were suggestions agreed upon between us on my second visit to said institution.

This, when done, will place the building, so far as the plumbing and drainage are concerned, in a sanitary condition.

Yours respectfully,
DEAN WILSON,
Chief Inspector.

BUFFALO, *January* 30, 1894.

Dr. ERNEST WENDE, *Health Department, Buffalo, N. Y.:*

Dear Sir.— On inspection, I find that the drainage at De Veaux College extends one-half to three-quarters of a mile from building to terminus; 10-inch tile sewer runs to outside building wall; the trap of sewer discharges its vent close to building. I would recommend that man-holes be built along line of sewerage to ventilate the sewer; that the main vent be placed 40 feet from building; that the vent should be at least 6 inches for effective purposes; that so much of tile drainage that lays under cellar proper be taken up and extra heavy cast-iron soil pipe be substituted; that the galvanized iron conductors be tapped at base and those in cellar be changed to cast-iron if they can not discharge into sewer outside of building; the water-closet vents should be flushed at least once during the season to prove their effectiveness from solidified condensation and corrosion; one sink trap on floor below should be remedied by placing trap close to fixture; chemical room sink not properly vented; bath vent on second floor

ıld be flushed and effectiveness determined; one sink double ·ped with inch waste pipe; the local vents of fixtures should ncreased and carried to heated flue; if not obtainable, the ficial heat should be near the point of discharge; one water- ·et on third floor is defective and valve to tank should be re- ·ed; the condensation from radiators should be discharged) sewer direct outside of main trap and be disconnected from t pipe of plumbing fixtures; the straight and local vents from ıtory on east side of building should be carried up above dows of main building between third and fourth floors; vents fixtures improperly made; should be carried above the highest ure before entering the main stack.

Respectfully submitted,

DEAN WILSON,

Inspector of Plumbing, Health Department.

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orts on Samples of Water by Herbert M. Hill, City Chemist, Buffalo.

DEPARTMENT OF HEALTH, OFFICE CITY CHEMIST.

BUFFALO, N. Y., *January* 17, 1894.

.boratory No. 5.
·urce, De Veaux College.
·livered by express.
·ndition: Turbid; filtered through an Albany filter and then ıgh a Pasteur filter.
e sample of water submitted to me for analysis has been ex- ed with the following results:
tal solids, 9.04 grains per gallon.
neral solids, 6.03 grains per gallon.
ganic solids, 3.01 grains per gallon.
ee ammonia, 0.02 parts per 1,000,000.
buminoid ammonia, 0.338 parts per 1,000,000.
lorine, 5.50 parts per 1,000,000.

Laboratory No. 3.
Source, De Veaux College.
Delivered by express.
Condition: Turbid; yellowish; unfiltered.
For sanitary analysis.
The sample of water submitted to me for analysis has been examined with the following results:
Total solids, 9.04 grains per gallon.
Mineral solids, 6.96 grains per gallon.
Organic solids, 3.08 grains per gallon.
Free ammonia, 0.01 parts per 1,000,000.
Albuminoid ammonia, 0.25 parts per 1,000,000.
Chlorine, 5.50 parts per 1,000,000.
This water contains too much albuminoid ammonia to be considered healthful.

Laboratory No. 4.
Source, De Veaux College.
Delivered by express.
Condition: Turbid; filtered through Albany filter.
The sample of water submitted to me for analysis has been examined with the following results:
Total solids, 9.97 grains per gallon.
Mineral solids, 7.54 grains per gallon.
Organic solids, 2.43 grains per gallon.
Free ammonia, 0.02 parts per 1,000,000.
Albuminoid ammonia, 0.338 parts per 1,000,000.
Chlorine, 5.50 parts per 1,000,000.
This sample of water contains too much albuminoid ammonia to be a safe drinking water.

Laboratory No. 7.
Source, De Veaux College.
Delivered by inspector.
Condition: Clear; filtered through Albany filter and Pasteur filter.

The sample of water submitted to me for analysis has been examined with the following results:

Total solids, 9.74 grains per gallon.
Mineral solids, 8.27 grains per gallon.
Organic solids, 1.47 grains per gallon.
Free ammonia, 0.05 parts per 1,000,000.
Albuminoid ammonia, 0.31 parts per 1,000,000.
Chlorine, 4.44 parts per 1,000,000.

This sample of water may be free from germs at the present time that a chemical analysis will not tell, but the amount of albuminoid ammonia in the water is so great that germs will be likely to grow in it if it stands any length of time after filtration. The amount of albuminoid ammonia is almost twice what should be in a good drinking water.

HERBERT M. HILL,
City Chemist.

Reports of Analysis of Samples of Water by Dr. W. G. Tucker, Director of State Laboratories.

NEW YORK STATE BOARD OF HEALTH LABORATORY,
ALBANY, *March* 5, 1895.

Dr. J. F. BARNES, *Secretary State Board of Health of New York, Albany, N. Y.:*

Dear Sir.— Inclosed please find reports upon the analysis of samples of water received on February 28, from J. S. Macklem, De Veaux school, Suspension Bridge, N. Y., which analyses have been made in conformity with instructions received from you.

Yours respectfully,
W. G. TUCKER,
Director.

(No. 256.)

STATE BOARD OF HEALTH OF NEW YORK.

Analysis of Potable Water.

[Parts in 100,000.]

Source, J. S. Macklem, Suspension Bridge, filtered rain v
"A."

Date when received, February 28, 1895.

Color and appearance, light greenish tint.

Odor at 100 degrees F., none.

Chlorine	(
Free ammonia	(
Albuminoid ammonia	(
Total solids	1
Loss on ignition	
Mineral matter	
Nitrites	Pr

Not entirely satisfactory, but of fairly good quality.

W. G. TUCKER,
Direct

Dated *March* 5, 1895.

(No. 257.)

STATE BOARD OF HEALTH OF NEW YORK.

Analysis of Potable Water.

[Parts in 100,000.]

Source, J. S. Macklem, Suspension Bridge, city water "B."

Date when received, February 28, 1895.

Color and appearance, light greenish tint; very slight sedim

Odor at 100 degrees F., none.

Chlorine	0.40
Free ammonia	Trace.
Albuminoid ammonia	9.0085
Total solids	13.80
Loss on ignition	4.60
Mineral matter	9.20
Nitrites	None.

Satisfactory quality.

W. G. TUCKER,
Director.

Dated *March* 5, 1895.

ALBANY, N. Y., *April* 18, 1895.

To Mr. HERBERT P. BISSELL AND OTHERS, *Committee of De Veaux College, Buffalo, N. Y.:*

Gentlemen.— I have the honor to transmit herewith, in compliance with instructions given at a meeting of this board, held on April 12, 1895, a copy of the report of Dr. F. C. Curtis, of his examination as to the sanitary condition of De Veaux College.

A copy of that portion of the report, which refers to the examination of the water supply of Niagara Falls, has been referred to the infectious disease committee of this Board for such recommendations as they may deem necessary.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

SCHOOL HOUSE AT TUCKAHOE.

TUCKAHOE, N. Y., *July* 25, 1895.

BAXTER T. SMELZER, *Secretary State Board of Health, Albany, N. Y.:*

Dear Sir.— I have examined the sanitary condition of buildings and surroundings of school district No. 3, and in my opinion, they are unfit for use as such. Last winter we had an epidemic of diphtheria which in my opinion was propagated by the condition of the water closets, which on trial proved that we were unable to clean on account of the constant filling up with water. You would oblige our board very much if you would send a State inspector to examine premises.

Very respectfully yours,

J. W. SMITH,
Health Officer.

ALBANY, N. Y., *August* 1, 1895.

To the State Board of Health:

A school-house at Tuckahoe, which has been reported as suspected of being in an insanitary condition, I went to see to-day.

It is a structure on the outskirts of the village evidently erected many years ago, built chiefly of wood, part of it, apparently an olden part, being of stone. Exteriorly it is in fair condition, in repair and well painted. The site is lower than the surrounding land on two sides but the surface slopes from it and is apparently well drained. Fairly extensive yards surround it, that for boys being cleanly and well kept, but the girl's yard is at present in an unkempt condition being used as a horse paddock.

In this latter yard is a deep privy vault containing considerable water and decomposing matter. Separated by the highway is another extensive yard, originally a part of the school lot, which is a boy's play ground, but it is low, the soil is partly saturated

a large privy pit in it contains water from the surrounding
a marshy portion has been in part filled in with ashes.
ıe school building is of two stories and is in the form of two
;s extending to the north and to the west, having in each a
s room on either floor of nearly the same dimensions, viz.:
ut 35 x 25 feet, and 10 feet high. On the first floor of one of
e wings is the primary room, lighted by three windows on each
, with small window panes, 3 x 5 inches in area, making a total
of 90 square feet, or only about 10 per cent. of the floor area,
equently the room is very poorly lighted, having only one-
d the desirable window area.
he light is improperly admitted from the right and left sides
upils, and the blackboards are between the windows. The
walls are partly wainscoted, the rest being plaster in good
lition and painted a neutral color. Behind the wainscoting
ıs told dampness showed, but I saw no evidence of this. The
ng is painted, but of too dark a color for so ill lighted a room.
floor is of hard pine not in perfect condition, being somewhat
ten and rough. The desks are of an antique pattern, and
nged to face the long way of the room. The room is heated
ı one register in the middle of the room by hot air from a fur-
: in the cellar. This furnace has a fresh air flue from out-
. I could not obtain access to this cellar, which extends
er but part of the building, but have learned through the health
er who has since inspected it that it is very damp. There is no
ns of ventilation other than by doors and windows. The air
ıe room, which has been closed for vacation is very close and
ined.
he other class room on this floor is of the same proportions,
as to walls, ceiling and floor the same. It has four windows
he right of the pupils as their desks are arranged, and two on
left, giving the same area as in the first room. There are
s for about 50 pupils and these are of more modern pattern.
ıe second floor is reached by a stairway between walls, 42
es wide and rather steep. There is an outside, uninclosed
den stairway.

The two upper rooms are of the same size as those beneath, but the pitch of the roof allows of partly higher ceilings. In the principal's room on this floor there is a parlor stove to the rear, otherwise all are heated from the furnace.

These like the other rooms are ventilated by the windows and doors only, and their condition otherwise is much the same.

There is no plumbing about the building.

As it is vacation I had no opportunity to inquire of the teachers as to the absence of pupils on account of sickness. Nor could I learn what the management was as to ventilation, recesses and gymnastics. Dr. J. W. Smith, the health officer, accompanied me; he thinks that recent prevalence of diphtheria has been to some extent due to the condition of the privy vaults.

If the building is continued in use for its present purposes, the number of pupils admitted to it must be, in the first place, much diminished. There is a seating capacity for and apparently an occupation by 200 pupils, and if there are 90 average attendants in the primary room the number is larger. At any rate the class rooms, which take up almost the entire space of the building, having a total cubical contents of 36,000 feet, allow but 180 cubic feet of air space per capita. There should never be less than 300 cubic feet of initial air space, and with this amount the air can be kept good only by renewing it ten times an hour. Children can not be healthy in such confined air. There is capacity for only 120 occupants of the building during school hours.

The lighting of the rooms is very faulty, which is a common failure with old school houses.

There is less than 100 square feet of window area to each room, whereas there should be 270, and the windows having small panes and old glass admit even less light than their space would imply. Worse than this the light is improperly admitted; it should come from the left and rear of the pupils, instead of from each side and in one room from the front. In addition to this the blackboards are between the windows, whereas they should be opposite the source of light. Impairment of eyesight is very likely to result from the continued use of these rooms unless material changes *are made* in lighting them.

s no system of ventilation. In small school-houses rooms ntilated by throwing open the windows while the pupils ned or sent out, but in so large a school as this some more lan for removing at least a part of the used up air should ed.

istruction, the walls and ceilings are in fair condition eing old and rather uneaven from repairs made but no n can be made to them; dampness said to exist behind the : should be looked into, no evidence appearing on the sur- he floors ought to be impervious and smooth; in their condition they can not be kept clean.

is objections should be made to the means of access to and om the second story. A narrow wooden stairs is unsafe a school-house.

ness in the cellar indicates that the site is undesirable un- drained, which is not difficult.

aults in the yards should be cleaned out, filled up with rth and replaced by more shallow and easily cleaned re- s, preferably boxes or dry earth closets. The present ar- nts are to be condemned.

Very respectfully, your obedient servant,

F. C. CURTIS.

---

ylor Street Sewer in the Village of New Brighton.

petition was presented to the board of trustees of the village Brighton, May 15, 1894, by five of us as a committee of and they passed a resolution to have it attended to. It ented to the board of health of the village of New Brighton r August 24, 1894, and they passed a resolution to the same nd nothing has been done. The five who presented it

Mulford D. Simonson.
Charles Turner.
Thomas White.
William Bamber.
A. D. Fountain.

PETITION.

To the Board of Health of the Village of New Brighton:

We, the undersigned residents, who live in the vicinity of th Taylor street sewer, which runs through the Booth property humbly pray that your honorable body will have it extended t low-water mark. The stench that comes from it is almost un bearable.

John Steers.
A. D. Fountain.
Robert T. Seaton.
Lawrence Steers.
Wm. Conell.
Jos. W. Edwards.
R. S. Ferre.
John Coughlin.
J. H. Rapelyea.
H. Turner.
Harry Wilde.
P. J. Brown.
Charles Turner.
Sarah Simonson.
John Lorich.
D. P. Duffie.
Henry E. Clark.
Charles Tynck.
Henry Trachsel.
Philip Sharrott.
Thos. Kenney.
Robert Atwell.
J. E. Brenzinger.
Martha Turner.
Rev. Pascal Harrower.
Chas. Schneider.
Thos. White.
G. B. Fountain.
Joseph Weir.

Frank Johnson.
John T. Lonsdale.
George W. Waters.
William Bamber.
M. A. Bamber.
Chas. F. Wilson.
A. Romer.
John De Groot.
Chas. M. Lyons.
Wm. M. Stewart.
John More.
Frank Wilson.
Geo. Fell.
Joseph Madden.
Mrs. J. Madden.
Wm. H. Fountain.
Geo. W. Pero.
Mulford D. Simonson.
Mrs. Sarah E. Simonson.

---

certifies that I have made an examination of the outlet
Taylor street sewer, West New Brighton, and find the fol-
condition of things to exist:
utlet pipe is never entirely covered by water, except occa-
at very high tide. The contents of the sewer are, there-
posed to the air and rays of the sun nearly all day.
low tide the sewerage matter is spread out over the flats,
g a foul odor, and compelling the occupants of the neigh-
houses to close their windows.
a state of affairs is detrimental to the health of those who
ır the outlet of said sewer, and productive of disease.
laughter of Mr. A. D. Fountain has been ill a long time, and
ill with a low type of fever, and there is good reason to be-
iat the illness has been caused, in a great measure, by the
ielling gases that arise from the outlet of said sewer.
:medy this bad condition, the pipes should be extended far
to always be covered by water.

E. D. COONLEY, M. D.

T *New Brighton, August* 24, 1894.

ALBANY, N. Y., *August* 1, 1895.

To Mr. J. H. MALOY, *President of the Village of New Brighton, P.-O. New Brighton, N. Y.:*

Dear Sir.— At a meeting of the State Board of Health, held on June 28, 1895, the following resolution was adopted:

"*Resolved*, That the State Board of Health recommend that the proper authorities of the village of New Brighton be requested to extend the Taylor street sewer from its present terminus to a point in deep water, in accordance with the plans proposed therefor by the village engineer, and that the secretary forward a copy of this resolution to the health officer and the president of the village."

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

ALBANY, N. Y., *August* 1, 1895.

To THEO. WALSER, M. D., *Health Officer, Village of New Brighton, P.-O. New Brighton, N. Y.:*

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Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

Pollution of East Owego Creek at Newark Valley.

NEWARK VALLEY, N. Y., *July* 23, 1895.

Gentlemen of the State Board of Health:

We, the undersigned, local board of health for the village of Newark Valley, said village being an incorporated village in the county of Tioga, and State of New York, would most respectfully report to your honorable body that in our judgment there now exists in our midst a condition of affairs which demands especial investigation and recommendation from State authority.

Briefly stated, the facts are as follows: In the very center and heart of our beautiful village stands a large sole leather tannery, now the property of the United States Leather Company. For more than fifty years this tannery has been the chief manufacturing enterprise of this community, and has contributed largely to its growth and prosperity, and this too for many years without annoyance to a small business center or menace to the public health. But time works its changes, and we have grown to a thrifty, enterprising village, now incorporated, and the tannery, which once stood almost alone, is now completely surrounded by private dwellings and business blocks, and occupies the principal business street in the village.

The liquid waste from the tannery, all the wash from scrub wheels, beam house, soak pits and acid vats, when emptied, is run into a raceway, which, within 40 rods, empties into a public stream known as the East Owego creek, about ten miles from its outlet, the Susquehanna river. This creek, for a long distance, runs through or near the center of the village, and during the low water, incident to the summer months, becomes so foul and polluted that its presence proves very obnoxious to the entire village and a possible menace to the public health.

There is nothing of bitterness between the local authorities and the tannery corporation, but, on the contrary, they express a willingness to comply with any reasonable requirements of law, and agree with us that the time is fully come for reform in this matter. But all parties interested are at once confronted with the obstacle—where to run the vast amount of wash and refuse.

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There seems absolutely no outlet for it except the public stream, and this it is unlawful to use, although its use for fifty years has been permitted without protest from State authority.

Now, in view of these facts, which we have aimed to set forth as briefly as consistent with a clear understanding of their nature, we most earnestly petition your honorable body that in behalf of State authority you send a special inspector or examiner to look over the entire situation and make such recommendation as shall to him seem best under the circumstances, which all alike concede to be very unfortunate. In this way alone we feel the tannery people may be saved the risk of needless expense in construction of sewers which must prove wasted entirely if constructed in violation of statutes of the State.

Trusting that this may receive your early consideration, as it is a matter which presses itself upon our attention and demands immediate action at our hands, and, moreover, work of this kind can best be done during the present condition of extremely low water.

Respectfully submitted by the Newark Valley Board of Health.

O. S. RANDALL,
President.

CHAS. FRANK,
Secretary.

C. R. ROGERS, M. D.,
Health Officer.

Report of Baxter T. Smelzer, M. D., Upon Investigation of a Complaint Made by the Newark Valley Board of Health.

To the State Board of Health, Albany, N. Y.:

At the request of the local board of health of Newark Valley, Tioga county, N. Y., I visited the said village October 30, 1895.

It is situated upon the eastern border of the county, and lies in a rich farming valley, with a mean elevation of about 1,200 feet above the tide. Its streams are the west branch of Owego creek,

ming the west boundary, and the east branch flowing south-
st through the center of the town, and on the Lehigh Valley
ilroad, and was recently incorporated. There are about 900
abitants. A large tannery, employing nearly 100 men, and
s having been in active operation for more than eighty years, is
w the chief industry of the place; in fact, the village is the
tgrowth of this extensive plant. The local board of health
imed the pollution of the stream by this liquid or drainage of
e tannery, known as the liquid waste, and the wash from the
rub wheels, soak pits, and acid vats, when discharged, is con-
cted into a raceway and within a few rods empties into a creek
own as the East Owego creek, and thence some few miles dis-
nt into the Susquehanna river. This stream runs through the
nter of the village, and seemed to be the only outlet for the dis-
arge; that said drainage polluted the stream, killing fish, and
a result, producing very disagreeable and obnoxious odors,
aking a possible menace to the public health. I found the su-
rintendent of the United States Leather Company an educated
ntleman, alive to the situation and willing to remedy matters
the best sanitary manner, and willing to close the plant and
ove to another locality. He has been very generous to these
ople, as, with a large drilled well, 98 feet in depth, with a strong
w of pure water, he supplies the public fountain in the village
uare, from which 40 or 50 families procure their water supply,
t the present time many of the wells are dry and others unfit for
e. I found in Owego creek very little water, and the fish had
ed from this cause alone. As was proven, the tannery liquid
as not poisonous to the fish, as several were found in fine con-
tion in a pool beneath the plant; also, subsequently learned
at the State Fish Commissioners had sent a representative to
ok into the matter and came to the same conclusion.

Remedy proposed.

I would recommend, as the best possible thing to be done, a
st-class system of sewers.

The inhabitants generally, in common with the tannery, have
ade a sewer of the creek at all seasons of the year, and refuse
every kind is daily thrown therein—unpleasant to the eye and

generally obnoxious. The local board of health should not permit any refuse whatever to be thrown into this stream or upon its banks, and a penalty should be provided for any transgression of said rule. The village is recently incorporated, and it might possibly work a hardship to some for the State Board of Health to recommend as the only remedy the sewer system. The superintendent of the United States Leather Company, as a temporary measure, and, as far as his plant is concerned, will build a sewer amply large to carry off the entire liquid and sufficiently flushed with water, and will extend it to a point that is remote from the village and satisfactory to the State and local board of health. This work is now under way and will be finished before freezing weather.

The local board of health of Newark Valley has the same power as the State Board, and this report must be considered rather as an advisory than an arbitrary one. On the failure of the local board of health to carry out the recommendations regarding the use of Owego creek as a public sewer, I would recommend, as the only solution, a general sewer system.

BAXTER T. SMELZER,
Secretary State Board Health.

Water Supply of the Village of St. Johnsville.

NEW YORK, *June* 21, 1895.

Hon. CAMPBELL W. ADAMS, *State Engineer, Chairman Committee State Board of Health:*

Dear Sir.— As requested by your communication of June 7th, I have visited St. Johnsville, and beg to present the accompanying report in connection with the subject brought to the attention of the State Board of Health by communications from Otis Williams, Esq., president of the board of trustees of the village.

Very respectfully yours,

JOHN BOGART,
Consulting Engineer State Board of Health.

Report in Reference to the Condition of the Water Supply of the Village of St. Johnsville, Montgomery County, N. Y., With Suggestions as to Measures Desirable to Improve the Sanitary Condition of that Village.

The village of St. Johnsville lies upon the north bank of the Mohawk river, the village being upon ground which rises towards the hill region to the north. The population at present is stated to be about 1,800. The village is growing rapidly, there having been an increase of about 400 during the last three years. There are a number of factories in active operation and a large new one in progress of construction and to be very shortly occupied. The surface grades of the streets are generally such as would carry off surface water, although special provision for this may be desirable in some places. The soil is generally porous, with considerable admixture of gravel. A stream runs through the village, flowing into the Mohawk towards the west part of the town, and from this stream there is led a raceway, the water of which is provided by a dam built near the northern limit of the village. This raceway runs through the village and is, for a great part of its length covered, and at places runs under buildings.

Reference will be made to this raceway in a future portion of this report.

The water supply has been put in, and is owned by the village. The main source of supply is an artesian well, which has been driven near the stream above referred to and near the foot of a very picturesque waterfall over which this stream descends from the very elevated plateau to the north of the village. The water from this artesian well flows, without pumping, into a reservoir built at the side of the precipitous western bank of this stream. This reservoir is 250 feet long, 40 feet wide, and, when full, about 10 feet in depth, thus holding about 750,000 gallons. The elevation of this reservoir above the principal part of the village is about 30 feet. The water from two or three small springs on the opposite side of the stream is led by pipe to this same reservoir, and gives a moderate additional supply. The water from the artesian

well and also from the springs, flows through nozzles above face of the water in the reservoir, thus giving a certain of aeration in the discharge. The water is led from the re by a ten-inch pipe to the village and there distributed by p varying sizes. The system is entirely of gravity, no pump required.

There is another artesian well nearer to the village, the from which also flows by gravity into a small reservoir conducted thence by a pipe to a connection with the distri system. This lower reservoir is covered by a roof of sh a part of this roof has been allowed to fall into decay and time of my visit a small portion of it had disappeared, bu remained was sufficient to give considerable protection reservoir. I am informed that the village, at a recent election, voted to supply a new covering for this small res which action is to be commended.

The upper or large reservoir described above has neve covered. As stated, it is built close to a steep hillside upon there is a large growth of trees, the leaves and dead woo which must inevitably fall to a great extent directly in reservoir. This will occur not only from those trees whic hang the reservoir, which are many in number, but also fron in the vicinity, from which the leaves will be carried by the The west wall of the reservoir is built in a cutting directly hillside and the drainage from this hillside runs into the voir. There are cow paths and wagon tracks along the h

The reservoir is formed by walls of masonry laid in c which have the appearance of substantial construction bottom of the reservoir, I am informed, has not been covere cement or concrete but is in the soil. I am also informed by bers of the board of health of the village, who accompani and by the keeper of the reservoir, that there are springs of coming up in the bottom of this reservoir. There seems t arisen in the village serious questions as to whether it is or desirable that this reservoir should be covered and one reasons for my visit was to consider and report upon this m

As stated above, the situation of this reservoir is such as to ake it impossible to prevent a considerable deposit of leaves and tritus, unless a radical change in the conditions is made. Its cation is also such as to make it open to the reception of mice, ogs and other animal life, this being particularly the fact on count of the steep hillside which almost overhangs the water. a fact, during my visit, the remains of several of these animals ere taken out of the reservoir. It may be possible to ameliorate, a certain extent, this condition of affairs by clearing away the mber and brush from the hillside and by excavating a trench some width between the wall of the reservoir and the hill. his, however, would involve considerable expense and the clear- g away would have to be extended to a considerable distance, account of the high elevation of the banks of the valley in both irections. The simple expedient for protecting the water in the eservoir from such contamination is covering it, and, on account f the very moderate size of the basin, this ought not to involve very large expenditure. The question remains to be considered hether the covering of such a reservoir would have a detrimental r beneficial effect upon the water.

This reservoir is supplied with water from an underground ource, and this water, as it issues from the well, is pure and holesome. The result of numerous experiences shows that a overed reservoir is necessary in connection with ground water upplies, and that pure ground water, when stored under cover, ill be practically free from organisms which produce offensive aste and smell in the water; and it has also been shown by expe- ience that ground water, when stored in an open reservoir, does evelop abundant growths of these organisms.*

The adoption of this experiment of covering reservoirs has been successful in its results in many places. Incidentally it may be said that a basin of the size of the one at St. Johnsville is prob- ably sufficiently large for the uses of the village, and that for the storage of ground water supplies a very large basin is not desir- able. The storage of the water of running streams, of course, is entirely different from, and such storage reservoirs can not be

*Trans. Am. Soc. C. E., *Vol. XXI, p. 527*, 541-543; also Vol. XV, pp. 142, 144, 145.

compared with, that now under consideration. It is, therefore, in my opinion, highly desirable that this reservoir should be covered, both as an economical means of protection from the intrusion of leaves and other vegetable material, and the accidental reception of animal life, and also in order to secure the advantages which are proved to accrue to storage of ground water by the exclusion of sunlight.

While the amount of water now available may be sufficient at this moment, yet the rapidly increasing population of St. Johnsville will soon require a larger supply. Measures should be inaugurated to provide for this demand.

There are no sewers at St. Johnsville. Most of the houses have privy vaults or cess-pits. A number of closets at the side of the raceway empty directly into its water.

The ground under the village is gravelly and porous. The cess-pits are generally built either with wooden sides or with stone walls with open joints. They have open bottoms, with nothing between their contents and the ground soil. The fluids in them percolate freely.

While this is not a desirable state of things at any time, the introduction of a public water supply materially changes the relation of open vaults and cess-pools to the condition of the neighboring soil. The quantity of water used in households increases enormously when it can be had freely by the simple turning of a stop-cock, and therefore there is an immediate and constantly increasing flow of fluids into the cess-pools and vaults. This fluid, with the solids in suspension or solution, passes through the bottom and the joints of the walls into the ground, and the contamination of the soil in the vicinity rapidly extends in area. The conditions which follow are unsanitary and dangerous to health. Recovery from sickness which may occur is retarded, and under certain circumstances the contamination of the ground soil becomes an active agent in the transmission and possibly in the inception of disease. Where sewerage can not be introduced other measures should be taken to prevent or limit this contamination, as for instance, by making all receptacles for house wastes water-tight *and arranging* for the proper removal of their contents.

But in a village such as St. Johnsville, with its promising future of active increase in population, the proper course is to inaugurate measures for the speedy introduction of a sewerage system. The topographical conditions are favorable and the expense will not be great. A study of the question should be made by a competent engineer, and plans for sewerage should be presented for the consideration of the State Board of Health, under the act to provide for the construction of sewers in any incorporated village of the State.

There are already water-closets in some private houses, and the number of these, both for residences and for mills, will increase with the use of the public water supply. This involves a still larger flow of fluids into the cess-pools and vaults and a constant extension of the probability of deleterious results.

I find that there are many wells in the village and that the water from them is used to a considerable extent for drinking and household purposes. Some of these wells are very close to cess-pools and privy vaults and certainly within the area of probable contamination and danger from percolation through the porous soil. The use of such wells is a menace to life and health, and the suppression of such use comes clearly under the provisions of the Public Health Law as to the suppression of any nuisance or other condition detrimental to life and health. The use of such wells should cease and the local board of health should make the proper order in each case where the conditions above outlined exist.

A number of privies discharge directly into the raceway above described. This is not proper. These privies should be removed and a provision of proper vaults be made until the introduction of a sewerage system.

The function of the State Board of Health in the premises is defined by the Public Health Law, which empowers that board to make examinations into nuisances or questions affecting the security of life and health in any locality. (Art. 1, § 6.)

It also has power to give notice to the presiding officer of any local board, requesting him to convene such board to take certain definite proceedings. (Art. 2, § 25.)

In the present case I would recommend that the local board of health of St. Johnsville be notified that, in the opinion of the State Board, it is desirable:

First. That the basin in which the water from the artesian wells is stored be protected by a suitable covering.

Second. That measures be inaugurated for an enlargement of the water supply.

Third. That measures be taken to procure plans for and proceed with the construction of a system of sewers in accordance with chapter 375, Laws of 1889.

Fourth. That the local board of health take immediate measures to put a stop to the use for potable purposes of the water from wells which are, in the judgment of that board, in danger of contamination from the percolation through the soil of the effluent from privies or cess-pits.

Fifth. That the local board of health take immediate measures to remove privies discharging into the raceway, and to have other provisions made for those now using these privies.

From the statements made to me at St. Johnsville I am of the opinion that this action by the State Board of Health will secure the requisite reforms.

But if it should be found, after a reasonable period, that the suggested action is not taken by the local authorities, then the more positive notification may be given, as provided by the last clause of section 25, article 2, of the Public Health Law.

Very respectfully,

JOHN BOGART,

Consulting Engineer.

New Rochelle Schools.

NEW ROCHELLE, N. Y., *October* 1, 1895.

To the State Board of Health, Albany, N. Y.:

Gentlemen.— The board of health of the village of New Rochelle have condemned several class-rooms located in the basements of two of our public schools. All of these condemned rooms

have been used for a year or more, and two of them have been occupied by classes for several years.

The board of education have never had a complaint made against any of these rooms until they were condemned by the local board of health a few days ago.

Moreover, the board of education feel they have some ground for doubting the necessity of closing and condemning all these rooms.

The board of education therefore respectfully requests that an officer or member of the State Board of Health be sent to New Rochelle to inspect and finally determine just what must be done in regard to these condemned class-rooms.

It may be added that more than 250 children will be deprived of school accommodations by the action of the local board of health.

The board of education earnestly requests the State Board of Health to act in this matter at their earliest possible convenience.

This request is made and this communication written by order of the board of education of the village of New Rochelle, N. Y.

Very truly yours,

I. E. YOUNG,

Superintendent Public Schools, New Rochelle.

OFFICE OF THE BOARD OF HEALTH,
NEW ROCHELLE, N. Y., *October* 5, 1895.

T. A. STUART, Esq., *Assistant Secretary State Board of Health:*

In answer to your letter of the 3d instant, I beg to submit the following reasons for condemning the five class-rooms in the two public schools of this town:

These so-called rooms (partitioned-off spaces) are all in the cellars of the buildings. Three of these rooms are under ground. The remaining two are just level with the grading (made). There is no cellar beneath, flooring being laid on the cement. The ceilings are low—9 feet; the ventilation entirely insufficient. In

close, humid weather the cement floor sweats, rendering the air in these rooms unfit for children or adults.

In these rooms the youngest children are taught, being promoted from one room to the other until, after two or three years, they are removed upstairs. This practice has been condemned by parents and physicians for years, but no previous health board acted in the matter.

I have acted carefully in this matter, and am glad to say that the following doctors, all of this town, are in accord with me: Drs. Tifft, Tyler, Finch, Littlewood, Buyrd, Eddy, Wells.

This is a malarious district; in fact, the same may be said for the eastern sound coast. The present health board have been endeavoring to stamp out the disease in this town by insisting on sanitary conditions, and, therefore, these rooms were condemned. For my part I consider it almost criminal to expose little children in this manner.

I have the honor to be your obedient servant,

F. W. DALRYMPLE, M. D.,
Health Officer, New Rochelle, N. Y.

P. S.— No one seems to know why the board of education insists in using these rooms and hiring old dwellings for school purposes.

F. W. D.

Report of Dr. F. C. Curtis Upon His Investigation as to the Condition of Class-Rooms, Etc., in New Rochelle Schools.

ALBANY, N. Y., *October* 14, 1895.

To the State Board of Health:

The board of public instruction of the village of New Rochelle, through Mr. I. E. Young, superintendent of public schools, on the 1st of October, reported to this board that several class-rooms, located in the basements of two of the school-houses, had been condemned by the village board of health; that part of these rooms had been used as class-rooms for several years without complaint being made against them or evidence of their having *had an ill effect* upon the health of the occupants, and, debating

the necessity for this action of the local board of health, a request for an inspection by this board was made. A copy of this statement was sent to the board of health of New Rochelle with a request that such information as it possessed concerning the condition of the school-houses in question be furnished. In reply, the health officer, Dr. F. W. Dalrymple, reported that the so-called rooms were partitioned-off spaces in the basements or cellars of the school-houses, three of which were partly under ground and two on a level with the surface and having no subcellar beneath; that the rooms are damp in close, humid weather especially; that the district being malarious increases the unsanitary condition; that the ventilation of the rooms is very imperfect, and that, being used for the youngest children, the occupants are the more susceptible to the effects of bad sanitary surroundings to which they are exposed, and that the rooms are unfit for the use to which they are put, not only in his opinion but in that of the other physicians and of citizens.

I would report that, at the request of Dr. Daniel Lewis, president of this board, I inspected these school-houses, October 11th, in company with Dr. Dalrymple and Mr. Young.

New Rochelle is a village of approaching 10,000 population, on Long Island Sound, in Westchester county. It has three public schools, all of modern construction, substantial and pleasing structures of brick, in capacious grounds.

The West New Rochelle school, built about ten years ago, is two stories high, and with an average attendance of 400 pupils. It has the Smead system of closets, which, as seen and as reported by the teachers, operates satisfactorily; the vault is connected by a drain with a cesspool in the yard which appears to be needless. There is no plumbing in the building except several sinks which receive waste from drinking water facets, and these empty either into the cesspool, or with the roof water, upon the surface at a distance to the rear. The teachers do not report the average attendance as materially interferred with by sickness.

In the basement of the building, enclosed by a board partition in which is a door and two sliding windows, separating it from a

corridor 26 x 8 feet, is an apartment used as a class-room for children about 8 years of age. It is a corner room having two windows on either side, the light coming from the left and rear of the pupils. The floor area of the room is 500 square feet, and the window area 50 square feet which is not half enough for lighting purposes. The walls are "furred out" and wainscoted and a close floor is laid a few inches above the concrete which covers the entire basement bottom. Along one side of the apartment the floor is 10 inches beneath the ground surface outside, and along the other wall the ground surface rises to 3½ feet above the level of the floor.

There are seats for forty children in the room but the number of pupils is about 30; this is double the number that should be allowed for the cubical contents of the room is less than 5,000 feet.

The remainder of the basement is occupied with corridors, a capacious one running the length of this room and into which it ventilates, by store rooms, heater and the vault of the Smead plant. There is no evidence of undue moisture about the basement except that the walls where not wainscoted show, beneath the ground level a little stain.

The Trinity Place School is older and larger, having an attendance of 1,000 pupils. It has a well devised system of automatically flushed water closets in a detached building just constructed. A capacious airy basement extends entirely beneath it, 9 feet high, the floor of which is smoothly concreted; it is taken up with steam heating apparatus, a large play-room or gymnasium and contains four class-rooms, a wide corridor extending the length of it. There is no appreciable dampness. At the north end the floor is between 4 and 5 feet under ground, but the ground surface reaches the floor level before reaching the south end, the building being of a long rectangular form with its long side north and south. In the northwest corner is a room 20 x 25 feet, giving less than 5,000 cubic feet of contents; having four windows, the bottom of which are at or below the ground surface, about 3 feet square, and a window area less than one-tenth of the floor area. A class of 30 children occupy it, each having about 150 cubic feet

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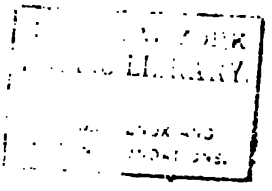


initial air space. It is ventilated only from the windows and ridor.

Midway of the basement is another room partitioned out of it out 15 x 20 feet in size used for a kindergarten, in which and in unpartitioned part of the basement adjacent, under two teach-, are 40 or 50 children. This room is much less beneath the rface than the first; it has three outside windows with a com-ned area of 45 square feet.

On the southeast and southwest corners are two class rooms x 25 feet, and 30 x 25 feet, or between 6,000 and 7,000 cubic feet space each, and six outside windows giving 100 square feet of ea. The floors are not beneath the ground surface. In each these rooms are about 50 children.

The walls of all these rooms are "furred out" and wainscoted, d have good floors raised above the concrete. All have ven-ation from the corridors in addition to that from the basement. The objection of the board of health to the use of these base-nt rooms for the purpose to which they are at present put pears to me well taken. They are subjected to the entry of ound air which is damp air and liable to be laden with impurities m the soil, and they are insufficiently lighted. As to dampness, the present case it is inappreciable so far as appearing sensibly coming from the soil into these basements, but the cold sur-es of the underground masonry precipitate the moisture from air in favorable conditions of the atmosphere; there is, further, posure to the admission of damp air from the lower strata of nosphere when windows are on a level with the ground surface. ound air is also likely to be drawn into the warmed basement, least unless an intervening damp wall is made, and besides the rface emanations from the soil find ready entrance through the v windows. Ground air is impure and unwholsome, and especi-y so, as noted by the health officer, when malaria conditions ist. The light is imperfect in all these rooms; instead of a ndow area equal to 30 per cent. of the floor space it is not half at. It might further be added that public schools should not ucate the people that basements, without ventilated sub-cellars least, are suitable for habitation.

Besides, it is evident from the facts reported that these rooms are much overcrowded. The ceilings are low and the cubical area such that there is not more than 150 cubic feet per capita, half what it should be. If a person renders impure 3,000 cubic feet of air an hour, the initial air space should be not less than 300 cubic feet.

For these reasons other provision should be made for the occupants of these five rooms, by the speedy erection of a new school-house. Pending this I think it safe to allow the use of the two south rooms in the Trinity Place school to be continued temporarily, and perhaps, also, the Kindergarten in the same building. The use of the north room I think should be suspended. Possibly the room in West New Rochelle School could also be temporarily continued with restrictions as to the hours and number of occupants, which could be done by admitting the pupils for half a day only. A similar recommendation should be made for the other rooms. I suggest this merely as a temporary expedient and as safe because there is no report of illness among the children and because the conditions existing are as sanitary as they can be in such basement rooms, and because otherwise more than 200 children would be excluded from school. But immediate steps should be taken for providing another school building; lacking which these rooms should be peremptorily condemned.

The law making school attendance compulsory should make all boards of health especially diligent in this matter of school hygiene.

Respectfully submitted,

F. C. CURTIS, M. D

School-house in Village of Bath-on-the-Hudson.

BATH-ON-THE-HUDSON, *January* 21, 1895.

To the Honorable State Board of Health:

We the undersigned taxpayers of the village of Bath-on-the-Hudson, believing the school-house on Broadway in said village, not to be in proper sanitary condition, and unable to obtain relief from frequent complaints to village officials, do most respectfully

you make an official examination as to the sanitary con-
f said school-house.

Wm. N. Card.
C. E Crandall.
Thomas Penney.
Elmer E. Wickes.
Edward E. French.
Geo. H. Dorwaldt.
W. Irving Williams.
W. O. Howard.
H. Du Mont.
John S. Wolfe.
Thos. Thompson.
Windsor T. Cunningham.
R. E. Fowler.
J. F. Lawrence, Jr.
John L. Teeling.

BATH-ON-THE-HUDSON, *January* 21, 1895.

tate Board of Health:

ndersigned, members of the board of health, of Bath-on-
son, respectfully endorse the within petition of the citizens
e signed it, for the purposes herein set forth.

WILLIAM WELFINGER,
President.
JOHN COWAN,
Clerk.
H. A. MAYER,
E. DAVIS.
JOHN D. HOUGHTALING.
HARRY ROCKEFELLER.
A. O. ROBERTS,
Health Officer.

Report of Dr. F. C. Curtis upon His Investigation of Complaint Against School-house in Village of Bath-on-the-Hudson.

ALBANY, N. Y., *February* 11, 1895.

To the State Board of Health:

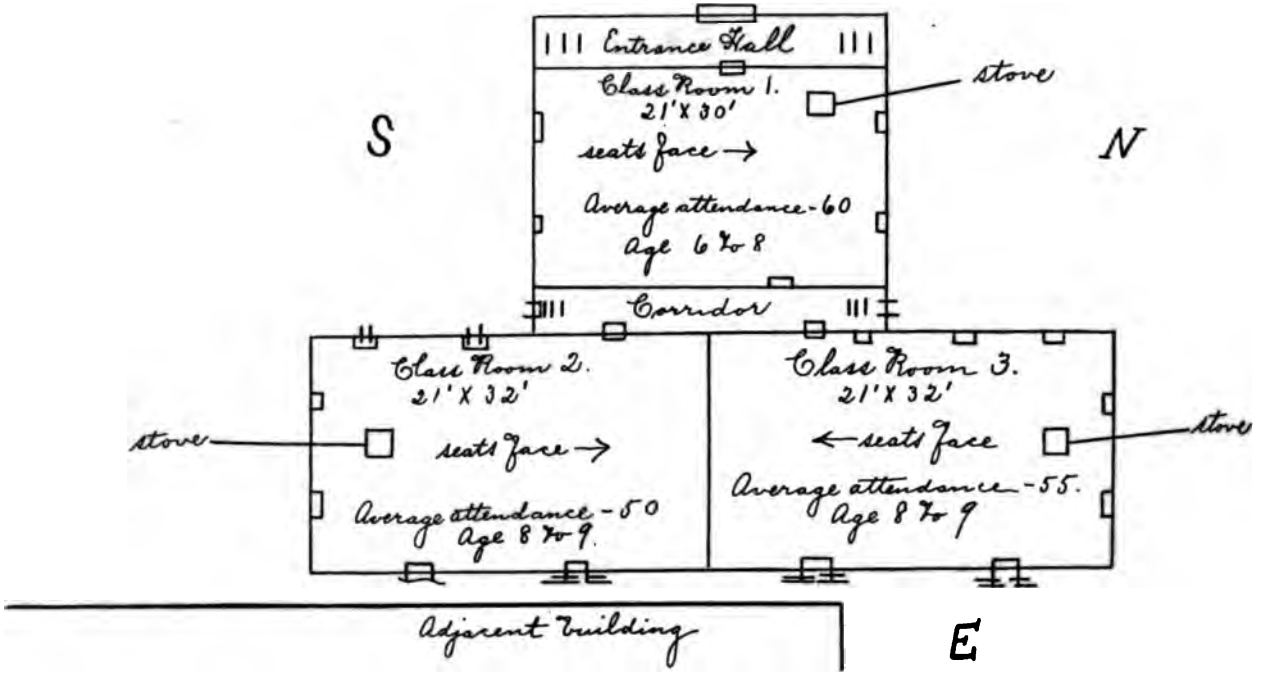
The school-house in the village of Bath-on-the-Hudson, concerning which a petition was presented in January to the State Board of Health for an investigation, consists of a two-story wooden building of fairly good exterior appearance, on an elevated site, but back of which the surface of the ground rises abruptly. It has sufficient air space to the front and sides but at the rear an adjacent building stands but a few feet distant so as to cut off light and air from the class rooms. Unsanitary conditions also exist on these neighboring premises in such proximity as to affect the atmosphere of the school-rooms.

The ground plan of the buiiding is shown by diagram.

As to ventilation it is apparent that the rooms are over-crowded: Class room No. 1 has an average attendance of 60 pupils, and it has for them 6,500 cubic feet of initial air space, or about 110 cubic feet per occupant. As 30 cubic feet per minute of fresh air is a minimum requisite for each occupant the initial supply is used up in about four minutes, and it is manifestly impossible to renew the air of the room so frequently without sweeping draughts. The other rooms being larger and with fewer scholars are better supplied. Not less than 300 cubic feet should be supplied each occupant of a school-room.

The means for supplying fresh air are those furnished by the windows, for while there are one or two ventilating flues in each room they are practically valueless, having no means of creating a draught in them and probably not removing enough vitiated air to meet the needs of one occupant. The windows are opened while the pupils are marched for a few minutes each morning and afternoon session, but are otherwise kept closed.

Heating is by direct radiation from stoves, one in each room. There is no "jacket," or metal screen, about them and it is manifestly impossible to properly distribute the heat in these rooms by means of such open stoves.


Entrance Hall
Class Room 1.
21'X 30'
stove
S
N
seats face →
Average attendance-60
Age 6 to 8
Corridor
Class Room 2.
21'X 32'
Class Room 3.
21'X 32'
stove
seats face →
← seats face
stove
Average attendance-50
Age 8 to 9.
Average attendance-55.
Age 8 to 9
Adjacent building
E

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e lighting of the rooms is especially faulty. In room No. 1, istance, there are four windows the combined lighting area ich is 65 feet, or 10 per cent. of the floor area, which is one- what it should be. But more than this two of these are ced that the pupils face them and are so a positive injury. ren can not occupy this room without injury to their eye- . The light should come from the left and rear. In this ct the other rooms are better lighted, having more and better ged windows. The blackboards are located as well as they e in such rooms. The walls and ceilings are white, which the circumstances is the best color, and lime washed which o well.

to construction, the class-room walls are in good condition, n room No. 1, the floor is good, but in each of the other two s most of the floor is very poor, being worn, rough and open, uch as should never exist in a class-room, especially when a y kept, cold and unsanitary cellar is beneath. It is im- ole to keep such floors clean and free from draught. I was but did not verify it, that the sills of the building are decayed mperfect.

all the rooms the out-of-door clothing of children is hung on in the room; it would be better if a suitable receptacle else- e were provided.

ter closets are provided in the basement, to which access is y stairs in a narrow corrider. These are of fairly good sort, supplied with intermittent flush with water. That of the is in decent condition, but the boys' closets and urinal are dingly ill kept and misused, and the ill odor from them must ne extent reach the rooms above. By different construction tchfulness of the janitor this should be remedied, and at the time better out-of-door ventilation should be secured. This be done.

to absence from sickness or other causes there are 186 names e roll and an average attendance of 150 or about 80 per cent. teachers do not report any definite complaints. Troubles ting the eyesight are alleged.

The upper floor of this building has rooms corresponding practically with those described. They are not in use.

I would report that the building has much to criticize in regard to lighting, heating and ventilation. It has also, as I have before noted, some unsanitary surroundings, especially privy vaults, in close proximity, which should be rigidly rectified by the village board of health.

If occupancy of the building as a school is to continue I would recommend the removal of the class-rooms to the upper floor, which could be made very much more sanitary. The entire building is of faulty shape, but rooms could be rearranged as to light, better ventilation secured, and better heating. Changes in these directions are necessary. Whether the structure is worthy of the expenditure necessary to secure a condition approximate to even fundamental sanitary requirements is a matter that a builder can determine.

Very respectfully,
F. C. CURTIS.

ALBANY, N. Y., *February* 12, 1895.

To Mr. WILLIAM WELFINGER, *President Board of Health, Bath-on-the-Hudson, N. Y.:*

Dear Sir.— I inclose herewith copy of a report made by Dr. F. C. Curtis to this department of an investigation made by him of a school-house in your village, in compliance with a request received from your board and citizens of the village.

It is earnestly recommended that the changes suggested in the report, looking to better sanitary arrangements in the school and its surroundings, be carried out by the authorities.

Very respectfully, your obedient servant,

J. F. BARNES,
Secretary.

Concerning the Proposed Construction of a Dam and the Adoption of a Sewer System at Owego, N. Y.

OWEGO, TIOGA COUNTY, N. Y., *April* 17, 1895.

To the State Board of Health, Albany, N. Y.:

Gentlemen.— During the hot summer months the Susquehanna river at this point is so low that the mouths of all the sewer-pipes are exposed, and vegetation, such as eel-grass, which lies on top of the water, catches all of the dead fish and other foul matter which floats down said river, thereby very much endangering the health of this community. In order to remedy this evil it is proposed to construct a suitable dam that will give enough water to cover up said sewer-pipes.

I inclose a petition signed by a number of the principal taxpayers, which please return. This petition will give you an idea of what the better class of citizens think in reference to this matter. Our local board of health are strongly in favor of having something done, but seem to lack the requisite amount of energy to order the trustees to do something.

Will you kindly give this matter your prompt attention, as we want to get things in shape so that the dam can be built during low water next summer, and in order to do this we have not any too much time if commenced at once. Should you send a representative here to look the ground over I think we can convince him that the dam is needed, and if he will call on me will be very much pleased to do what I can towards showing him around.

Yours truly,

H. P. COLBY,
A. C. BURT,
Care of Dean & Burt.

We, the physicians of Owego, petition the honorable board of trustees that they cause a suitable dam to be constructed across the Susquehanna river at a point below the Delaware, Lackawanna and Western, Cayuga division, railroad bridge.

Said dam to be built at the expense of corporation, and to be 2½ feet above low water mark.

Construction and material of dam to be decided upon by the board.

W. L. Ayer.
M. T. Dutcher.
A. W. Stoutenburg.
A. T. Pearsall.
C. L. Stiles.
E. S. Beck.
D. S. Anderson.
J. M. Barrett.
C. R. Heaton.

We, the tax payers of Owego, petition the honorable board of trustees that they cause a suitable dam to be constructed across the Susquehanna river at a point below the Delaware, Lackawanna and Western, Cayuga division, railroad bridge, consent having been given by Mr. Halstead to anchor on both sides of river.

Said dam to be built at the expense of corporation and to be 2½ feet above low water mark.

Construction and material of dam to be decided upon by the board.

A. C. Burt.
H. J. Mead.
A. P. Storrs.
Wm. Smyth & Son.
Daniel Johnson.
Scott & Waters.
A. Chase Thompson.
L. M. Kingman.
C. B. Dean.
Geo. O. King.
C. L. Stiles.
W. L. Hoskins.
Ellery Colby.
C. B. Rubert.
Geo. F. Andrews.
C. R. Heaton.
A. H. Ellis.

Frank J. Burgess.
C. E. Schoonmaker.
F. A. Darrow.
Otis S. Beach.
Robert Bandler.
Patrick Leahy.
J. W. Hollenbeck.
Martin S. Lynch.
G. M. West.
John T. Cochran.
Grant McDonald.
D. H. Bloodgood.
O. T. Gorman.
M. E. Hollister.
Fred Hamilton.
Julius L. Straus.
O. G. King.
E. H. Miller.
Joel A. Hamilton.
J. E. Jones.
Theo. D. Gore.
J. Berry.
A. W. Parmelee.
J. M. Barrett.
E. J. Shaw.
Geo. Tuck.
F. G. Durfee.
J. C. Kenyon.
G. O. Steele.
D. A. Cameron.
Romeo Stevens.
W. W. Ball.
C. L. Wood.
P. C. Peterson.
F. E. Brockaway.
E. W. Stone.
F. E. Platt.

James Webster.
J. R. Sweet.
C. B. Dugan.
H. H. Brant.
D. J. Brown.
Geo. W. Barton's Sons.
L. S. Leonard.
H. Young.
C. P. Thurston.
A. T. Pearsall, M. D.
Miller Bros.
Foster N. Mabee
F. F. Moore.
H. C. Williams.
C. R. Dean.
A. J. Pritchard.
Peter Cuner.
J. J. Delavan.
C. A. Link.
B. J. Davis.
Leon L. Brockaway.
W. S. Truman.
C. D. Yothers.
J. S. Houk.
B. M. Stebbins.
F. J. Beers.
Scott Harris.
G. A. Durnssel.
C. E. Livermore.
Goodrich & Co.
G. T. Truman.
E. D. Downs.
H. P. Colby.
Dr. E. A. Mayer.
C. A. Carter.
H. A. Clark.
W. C. Foster.

L. Archibald.
Geo. H. Strong.
E. B. Booth.
T. H. Reddish.
S. F. Fairchild.
A. S. Parmelee.
W. W. Andross.
E. J. Stein.
J. L. Matson.
G. N. Bacon.

ALBANY, N. Y., *May* 11, 1895.

IPBELL W. ADAMS, *State Engineer and Surveyor, Chair-Drainage Committee, State Board of Health:*

n accordance with instructions received from you I have leted the required examination in the matter of the com-on of A. C. Burt of the village of Owego, relative to an uisance at that place and respectfully submit the follow-t:

is located on the Susquehanna river, about seven miles he Pennsylvania State line; is a place with a population 7,000 inhabitants and has no regular system of sewage. , however, a few public and several private sewers that o the river along the village water front, and the outlets of these are above the surface of the water in the river at s in summer. The banks are quite precipitous on both he river at and near the village, but at low stages of the ite large areas of the river bottom are exposed leaving d much decaying animal and vegetable matter and creat-dition, as is claimed by nearly every resident physician, imental to the public health.

is supplied to the village from a reservoir created by im-the flow of a small stream located among the hills near , that at all times furnishes a bountiful supply of excel-ity. Many years ago a dam was constructed at a point

just outside the southern limits of the village and it is alleged by many prominent citizens that no trouble was experienced during the existence of the said dam. This dam was destroyed a few years ago by parties owning the land where the said dam was located.

Front street is located along and parallel to the Susquehanna, and it is from the houses on this street that most of the private sewers are discharged and several public sewers also cross this street and discharge into the river. When I began the examination I was satisfied that a trunk sewer constructed through Front street would be the proper remedy, but a further examination showed that should a complete system of sewers ever be built, Front street was, owing to its elevation, not the proper place for such sewer. The elevation of this street is considerable higher than the second street west of it, and when a system be constructed, the main sewer to outlet should be built through this latter mentioned street. I am informed by many persons who are in position to know whereof they speak, that the village is not in such shape financially as will warrant the construction of a complete system of sewers at this time, hence are in favor of building a cheaply constructed crib dam having a height sufficient to keep the water along and in front of the town at such an elevation as will keep the river bottom covered at all times. The petition asking for the construction of this dam was signed by a very large number of the prominent residents of the village, including all of the physicians resident there. The required height of the dam would not exceed two feet above the surface of the river at a summer stage of the water, and as it has quite a rapid current at this place, there will be little danger of the accumulation of sewage in the pond thus created. The river at site of the proposed dam is very shallow and a crib dam of the necessary height ought to be constructed at a cost of not more than five or six thousand dollars, as timbers can be had at a very reasonable cost at Owego, and the stone for filling cribs are near at hand and will cost nothing except for handling. The local authorities undoubtedly have the power to direct the construction of such dam, but as-

stated in one of the communications returned herewith, there would probably be required the advice and support of the State Board in order to prevent any disagreement between the local board of health and the board of trustees of the village. In the event of the construction of a complete system of sewerage that would collect and discharge the sewage of the village into the river at a point below the site of proposed dam, the dam would still subserve a useful purpose in keeping the river bottom covered at all stages of the water and would add very much to the place from an aesthetic as well as sanitary point of view. Having in mind the fact that a very large number of the people of Owego, including all of the physicians of that village, ask that the dam be built, and as there seems to be no other remedy at present or in the near future available, I would respectfully recommend that the local authorities be advised or directed to construct the said dam for the protection of the health of the village. I would also recommend that as the village of Owego is very much in need of a proper system of sewerage, that the local board be advised to hasten the adoption and completion of some system of drainage as speedily as circumstances will permit.

Respectfully submitted,

M. SCHENCK,
Consulting Engineer.

ALBANY, N. Y., *May* 28, 1895.

To Mr. S. B. GRIFFING, *President Board of Health, Owego, N. Y.:*

Dear Sir.—I am directed to transmit herewith, copy of a report made by Martin Schenck, consulting engineer of this board, on a complaint made by A. C. Burt and others relative to an alleged nuisance in the village of Owego.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

OF

Prevalence of Typhoid Fever at the St. Lawrence State Hospital.

STATE OF NEW YORK — STATE COMMISSION IN LUNACY,

ALBANY, N. Y., *August* 7, 1895.

State Board of Health, Albany, N. Y.:

Dear sir.— The State Commission in Lunacy is informed by the superintendent of the St. Lawrence State Hospital that typhoid fever has been more or less prevalent in that institution since its opening. It has occurred, however, chiefly in the winter months. This year it has been more or less prevalent during the summer, and indications are now that it may become "endemic." The commission would respectfully request that your board send a competent representative to the St. Lawrence State Hospital to investigate the situation.

The hospital authorities report that they are taking such precautions as are within their means, such as boiling their water, etc.

Very respectfully yours,

CARROLL F. SMITH,
Acting Secretary.

Report of Dr. Curtis on the Prevalence of Typhoid Fever at the St. Lawrence State Hospital.

ALBANY, N. Y., *September* 7, 1895.

To the State Board of Health:

A communication from the State Commission in Lunacy was received at this office, August 8, stating that it had been informed by the superintendent of the St. Lawrence State Hospital that typhoid fever had been more or less prevalent at that institution since its opening, occurring chiefly in the winter months; this year its prevalence continuing during the summer, indicating that it had become endemic, and requesting that an investigation be

de by representatives of your board. At the request of the retary I went there for this purpose.

This institution is situated on the bank of the St. Lawrence er, three miles below Ogdensburgh, on a broad point, around ich the river makes a curve of half a circle. The banks here d throughout this vicinity are abrupt but low, and the topog- hy level, the extensive grounds which are slightly rolling, bably nowhere having an elevation so great as 50 feet above water. The buildings consist of three groups of connected e or two story structures alternately, of dark granite and tsdam sandstone, known as central group and group No. 1, and up No. 3, the first having a more pretentious central edifice in ich are the administration offices and rooms for residence of ne of those in charge, the whole group having a semi-circular ntage of one-third of a mile; the other groups are much smaller. l are well away from the river. They are of the most sub- ntial construction throughout and being recently built, are rfect as possible in modern sanitary details. There are other ildings for the residence of the attendants, the superintendent, shops, boiler house and so forth. Connected are farm lands, getable grounds and dairy for the use of the institution. Por- ns of the central group and group 1 were completed in 1890, d occupancy began December 9th of that year; the remainder of ese groups and group 3 were constructed in 1892. The site is ll drained and has not prior to this been occupied by residental ructures; surrounding it there is but sparse population.

The population of the institution now numbers about 1,600, of om one-fourth are employes, and three-fourths insane people. ie latter are of all varieties of insanity, the hospital receiving l the insane from a defined territory which includes the nothern unties of the State.

The institution is supplied with water pumped for it separately om the St. Lawrence river at this point; its milk supply is from s own dairy and the vegetables and farm products are raised on s own grounds.

HISTORY OF THE TYPHOID FEVER IN THE HOSPITAL.

In February, 1891, two months after occupancy began, the first case of typhoid fever made its appearance; the second one developed in May. There were no more until February, 1892, during which year five cases occurred. In 1893 there were seven cases, three in the winter and four in the fall months. In 1894, commencing in March, there were ten cases, most of them in the fall months. This fall prevalence continued into 1895, during the winter or more especially the spring months, up to April, 15 cases occurring, and six more followed in the summer. There have been since the first 45 cases, of which 2 came in 1891; 5 in 1892; 7 in 1893; 10 in 1894; and 21 during the present year. At the present time there are no cases. Of the 45 cases, 22 were patients, 16 attendants or nurses, and 7 employes about the institution, less than half of the sick being insane, although they constitute three-fourths of the population. If the exposure were the same this would lend evidence to the observation that the insane are less susceptible to infectious disease. A few were temporarily or permanently cured of their insanity. There were 14 deaths, of which 8 or more than half were among patients, 4 were attendants, and 2 were employes. The attendants all live in the buildings and differ from the patients only in having more liberty to go outside; the other employes live upon the premises; the patients had all been for a sufficient time in to take their infection here, and this was generally true of the others.

As to the character of the fever there is no question. Several autopsies were made which verified this diagnosis. The sick were generally treated in the hospital wards connected with each group. The excreta were disinfected with 1-2000 solution of bi-chloride of mercury and thrown into the water closet.

As to the location of the cases, the first seventeen cases occurred in the central group and group 1, except a painter and a fireman who lived in other buildings. As already stated portions of these groups were built and occupied a year or two earlier than the rest of the hospital building. There was no sequence of occurrence

ny one place. There were but six cases in group 3, and three hese were attendants and three patients. By means of the owing table the sequence, locality, etc., of the entire series of s is shown.

Number of cases.	Date of sickness.	PATIENT OR EMPLOYE.	Building occupied.	Recovery or death.	Other data.
	1891.				
1	February	Attendant	Group 1	D.	Died of tuberculosis.
2	May 18–June 18	Patient	Group 1	R.	Pneumonia fourth week.
	1892.				
3	Feb. 10–March 10...	Laundress.....	Central Group C....	D.	Perforation of intestines.
4	Feb. 25–April 4.....	Painter	Separate building . .	R.	Been away several days before onset.
5	March 14–25	Attendant.....	Central Group W ...	R.	Mild.
6	May 2–June 9	Patient	Central Group W ...	R.	Frequent epistasis.
7	Aug. 15–Sept. 13....	do	Group 1, W	R.	Pregnant.
	1893.				
8	Jan 9–Feb. 19.....	Patient	Central Group W ...	R.	Recovered from insanity.
9	Feb. 24–April 6.....	Attendant.....	Central Group W ...	R.	Epistasis delirium; sore throat.
10	April 13–25	do	Central Group E....	D.	Perforation of intestines.
11	Sept. 8–30.....	Patient	Central Group W ...	R.	
12	Oct. 1–Nov. 28.....	Fireman	Separate building ...	R.	Cared for in infirmary, Group 1.
13	Oct. 28–Nov. 28	Patient	Central Group E....	R.	
14	Nov. 17–Jan. 11	do	Central Group E....	R.	Recovered from insanity.
	1894.				
15	March 2–April 20 ...	Patient	Group 1, W	R.	Constipation marked.
16	April 11–16	do	Central Group W ...	D.	Severe diarrhœa.

18	Aug. 28–Sept. 3 ...	Attendant.....	Group 3	R.	Possibly infected from Ogdensburg well.
19	Sept. 11–Oct. 16	Laundress	Central Group C....	R.	Drank from old well near Group 1
20	Sept. 19–Oct. 15	Attendant.....	Central Group E....	D.	Malarial symptoms; ground near turned up.
21	Sept. 23–Oct. 30	do	Group 3	D.	Malarial symptoms; ground near turned up.
22	Oct. 1–Dec. 1	Patient	Group 3	D.	Died from acute pleurisy.
23	Oct. 9–Nov. 13.....	do	Central Group W .	D.	Autopsy showed typhoid lesions.
24	Oct. 28–Dec. 10.....	Wife of carpenter	Separate building ...	R.	House has general water supply.
	1895.				
25	Jan. 9–Feb. 5.....	Attendant.....	Central Group W ..	R.	Temp. curve very characteristic.
26	Feb. 9–April 5.....	do	Central Group E....	R.	Works at Group 3.
27	March 3–April 20 ...	Patient	Central Group W ...	R.	Temperature 105° first week.
28	March 5–April 20 ...	Attendant.....	Central Group W ...	R.	Employed 3 weeks before onset.
29	March 9–April 5	do	Central Group C....	R.	Long resident.
30	March 6–25	Patient	Group 1	R.	Epilepsy suspended.
31	March 13–April 17 ..	Attendant..... ...	Central Group W ...	R.	Morning temperature high.
32	March 13–April 9 ...	do	Central Group E....	R.	Lives in ward.
33	March 16–April 5 ...	Patient	Central Group E....	D.	Autopsy showed characteristic lesions.
34	March 17–April 4 ...	Attendant.....	Group 1	R.	Strict brain treatment.
35	April 6–28	Patient	Central Group E....	R.	Acute mania; no effect on.
36	April 8–19	do	Central Group E....	D.	Autopsy; marked typhoid lesions
37	April 9–16	do	Central Group W ...	D.	General paralysis, last stage.
38	April 10–May 6.....	Waitress	Central Group E....	R.	Infection possibly from case 12.
39	April 14–May 11....	Attendant.....	Central Group E....	R.	Infection possibly from case 12.

Number of cases.	Date of sickness.	PATIENT OR EMPLOYE.	Building occupied.	Recovery or death.	Other data.
	1895.				
40	June 22–July 8	Patient	Central Group W	D.	High temperature, 105°.
41	June 26–Aug. 15	do	Central Group W	R.	Temperature 105°; mental symptoms improved.
42	Aug. 1–Sept. 9	Employe	Central Group W	D.	Relapse; peritonitis nephritis.
43	Aug. 4–24	Attendant	Central Group W	R	
44	Aug. 8–23	Patient	Group 3	R.	Mild case; chronic mania.
45	Aug. 9–15	do	Group 3	D.	Temperature high; heart failure.

haracteristics of this endemic are exhibited by this table.
:n that soon after the hospital was opened it began, only
es occurring during the first year; that they became more
ıs with succeeding years and increase in the population,
)een especially and excessively so during the current year.
· is seen to be no aggregation of cases at one period of
) date on which a considerable number had their onset,
there long periods of freedom from them. During March
ril of this year excessive numbers of cases occurred, but
re, in accord with the general habit of the endemic at the
of its course, distributed uniformly through this period.
ng this year there were five cases in the winter months,
he spring, three in the summer and 10 in the autumn.
er the cause, it is not one of transient and extraordinary
·r, but persistent and constant.

locality of development it is seen that occupants of all the
gs and of different parts of the groups of buildings were
. A large part of the cases occurred in the central group.
; is a much more extensive structure than the rest; it was
distributed in the different parts of this group. Cases
ed among those resident in the separate buildings, a con-
s case being that of a carpenter's wife who has no employ-
)out the hospital buildings.

were 22 patients, 16 attendants and 7 employes among
, which shows a general distribution.

ıave an endemic showing uniformity of distribution
out the institution and throughout the period of its exist-
Those sick with it had none of them been residents for
n several weeks, the patients being confined to the prem-
: attendants having more liberty to go outside, but all
in.

ırching for the cause of typhoid fever we would look in
ive directions: First, faulty plumbing; second, imperfect
:he excreta and articles soiled therewith; third, infection
neighboring source; fourth, infected food; fifth, infected

First. If the plumbing were suspected we would have to account for its specific infection with typhoid matter; in the present case it was new, not connected with any other sewerage system, and the fever began to prevail from the first. We should find the cases limiting themselves to a single building or series of wards, for it would not be reasonable to expect such a cause to operate simultaneously over the entire institution. This work was modern and was planned and supervised by competent specialists. If sewer air is ever a carrier of typhoid fever, which there is some reason to question, there is nothing in the present outbreak to lend suspicion that it was traceable to this cause. The sewage empties into the St. Lawrence river below the hospital.*

Second. As to cases being secondary to pre-existing cases, there is no reason to suspect that this occurred. Disinfection of the excreta and soiled fabrics was carefully attended to and I believe that in no case did it fail to be perfect.

Third. As to the existence of a source of infection in the immediate neighborhood that might be directly operative, the only locality with which the hospital has close relations is Ogdensburg, three miles distant; a few cases of typhoid fever occur there every year, but the place has been free from any special prevalence. Within recent time a group of several cases occurred there all of which were traced to an old well; the only three deaths within a year were among these. Case 18, an attendant possibly was infected from this, though there is no direct evidence to that effect. Ogdensburg obtains its water supply from the Oswegatchie, which is an unnavigable and comparatively pure stream. There has been no special prevalence of typhoid fever in this immediate vicinity outside of the hospital.

Fourth. Infected food. This is a source of infection always to be considered, although exceptionally operative. Milk, the most important of this class, is supplied from the farm connected with the hospital and so directly under its supervision. There is no

*Dr. Wise has called my attention to a report to the London County Council, 1892, by J. Parry Lewis, F. I C., on investigations as to the existence of specific micro-organisms in sewer air, which is interesting in this connection, a conclusion of which is that their source is not from the sewage but from air without the sewers, and that *there is very little* ground for supposing that, in the absence of violent splashing, the *micro-organisms* of sewage become disseminated in the sewer air.

:e for its specific infection. The same is true of all farm
ıce, celery, lettuce and the like, which are eaten without
ng. Oysters and ice cream are productive of fulminant out-
:s and would never act as a constant source of a prolonged
mic. Ice, which is taken from the St. Lawrence river, is
ut into the drinking water of the patients and attendants,
s used by the officers and their families, and there has been
phoid fever among them. The character of the endemic is
hat of food origin.

th. The water supply. This is from the St. Lawrence river,
ı from a point directly off the hospital grounds by means of
on pipe carried 200 feet out into the current and 18 feet
ıth the surface. The river here is a very broad, deep stream,
a velocity at the intake of five miles an hour, the current
; so swift and strong that is was with difficulty that the
was extended thus far. The water supply being suspected
ipe was extended in 1893 from a terminus nearer shore, at
ıstance of Dr. Wise, the superintendent of the hospital; this
followed and possibly because of it by a period of cessation
e endemic. The water flows by gravity into a well of solid
nry, whence it is pumped to the institution. The volume
limited and the water, though hard, is in appearance per-
; transparent and good. It has been analyzed once chemi-
and bacteriologically without the discovery of anything
s with it. Failure to find the specific infection is, however,
ımon experience in connection with typhoid fever.

ere is an old well back of group 1 near an old brick cottage,
ınly one on the premises, which is occasionally though sel-
used and has no relation to the case; it is referred to in con-
on with case 19.

ould report that it is my opinion that this water supply is the
:e of the endemic; first, because the other common sources
he development and spread of typhoid fever may all be ex-
:d; second, because the characteristics of the endemic are
: of such a constantly acting cause; third, because in the vast
rity of cases the epidemic or endemic prevalence of typhoid
: is due to a contaminated water supply. In the present

case we have a navigated and sewage-bearing stream used as the source of supply. The volume of the stream is so great that the pollution is almost inappreciable either to the unaided eye or to bacteriological test. But we know that the typhoid germ is a particular body, and while the number may be so comparatively infinitesimal in the volume of its carrier that it can not be detected by the chemist, it is still capable of showing its presence and vitality by the clinical test, if, being present even in minute quantity, it reaches a susceptible intestinal tract. This river is open to the possibility of specific infection from the shipping and from the sewage entering it above this point. There is only general rumor as to the probability of the former being a contributory source of this infection; as to the latter we know that specifically infected sewage enters the river above.

Ogdensburg, directly above the hospital and sewering into the river, is, as I have said, comparatively free from typhoid fever, but has had for the past five years from two to five deaths yearly, each death probably representing four or five cases of the disease.

These deaths occurred at the following periods: in 1891, in March, August, September and November, each 1 death; in 1892, in April, May and September, each 1; in 1893, in November and December each 1; in 1894, in March, April, May, July and November, each 1, and in 1895, in April, June and August, each 1. It is not perhaps possible to show a direct connection between these irregularly distributed cases and the development of cases in the hospital, but cases of the disease existed at the time of their occurrence, and it is probable that some of the germs in active condition reached the institution and contributed at least to the prevalence of the disease.

Further up the river some 40 or 50 miles, is Clayton and near by the summer resorts of the Thousand Islands. In these latter there is no evidence that there has been any prevalence of typhoid fever, but at Clayton there have been deaths in the fall of the past three years and especially last year, two deaths occurring in each of the months of August and September and one in November.

At Cape Vincent, higher up, there has been an occasional case,

hough none have been reported recently since 1892. At Kingston opposite, in Canada, it is said that typhoid fever is much of he time prevalent, but of this I have no official report.

Still further away, probably 100 miles or more as the water ows, at Watertown, typhoid fever has been more or less prevalent or years. In 1891 there were 6 deaths; in 1892, 8; in 1893, 9; in 894, 15; and thus far this present year, 16; the death rate from t would appear to be about 100 per 100,000 inhabitants, which is ery high. Deaths occur at all seasons, in the winter, spring, ummer and more numerously in the fall. There has been an inreased prevalence for the past year and deaths have occurred as ollows: In 1894, in May, 1; July, 1; August, 3; September, 4; October, 4; November, 2; in 1895, January, 1; April, 4; May, 5; August, 5. Since October, 1894, the number of cases reported ave been as follows: 1894, October, 9 cases; November, 4; December, 1; 1895, January, 4; February, 4; March, 1; April, 15; May, 27; June, 0; July, 8; August 56 — a total of 129 cases.

I do not think we are sufficiently familiar with the habits of the typhoid germ under varying conditions, and especially regarding its vitality in running streams, to determine whether they can be operated from such a distance. But I think we are quite as likely to obtain data by clinical observations as by any other means, and these are given for what they may eventually be proven to be worth. The elimination of other causes and the characteristics of the epidemic or endemic appear to me to show that the source of contagion is the water supply.

As to the remedy Dr. P. M. Wise, the superintendent, has from the first regarded the water supply with suspicion and attempted to remedy it, first by extending the intake further into the stream and later by sterilizing the water by heat, and a measure of success has seemed to follow. The latter is however impossible to secure absolutely, but it is the only present remedy.

Good results have been of recent years secured with such waters from large open filter beds, and would undoubtedly be here, although the lack of a sufficiently elevated site for them would probably present a difficulty. To abandon a source of water

supply as abundant, accessible and attractive in appearance seems hard to recommend, but unless it can be sterilized its continued use can not be commended.

Very respectfully,

F. C. CURTIS, M. D.

ALBANY, N. Y., *September* 28, 1895.

Mr. T. E. MCGARR, *Secretary, State Commission in Lunacy, Albany, N. Y.:*

Dear Sir.— In complance with a request made by the State Commission in Lunacy under date of August 7, 1895, Dr. F. C. Curtis, medical expert of this office made an investigation as to the cause for the prevalence of tyhoid fever at the St. Lawrence State Hospital, and has submitted his report, a copy of which is herewith inclosed.

Very respectfully, your obedient servant,

T. A. STUART,
Assistant Secretary.

STATE OF NEW YORK — STATE COMMISSION IN LUNACY:

ALBANY, N. Y., *September* 30, 1895.

To the State Board of Health, Albany, N. Y.:

Gentlemen.— I have the honor to acknowledge the receipt of a copy of the report of the State Board of Health upon the "Prevalence of typhoid fever at the St. Lawrence State Hospital," in response to a request of the commission under date of August 7, 1895.

I am, very respectfully yours,

T. E. MCGARR,
Secretary.

VILLAGE OF EDGEWATER.

NEW YORK, *July* 1, 1895.

To the Honorable the Secretary of the State Board of Health:

Dear Sir.— For several years past, and from time to time complaints have been made to the local board of health against stagnant ponds of water upon the streets of the village which are public nuisances and detrimental to the public health, and have been declared to be such by the local board of health, and so presented by several grand juries, but whose presentments our local officials wholly ignore. I will mail you to-day an outline map of these nuisances and a profile, both of which were prepared by the village engineer, but nothing has been done under the same. I have no doubt of the power of the State Board of Health in the premises, but have grave doubts of the rights of individuals affected to compel the local board by mandamus to abate the nuisances complained of.

I believe the time has passed for referring the matter to our local officials for action; it would lead to no result, and if I may be pardoned for a suggestion, the immediate neighborhood and vicinity of Concord should be inspected by some person whom you may designate to report back, and I am willing to meet any such person here in giving aid and information, as I firmly believe and am convinced that the State Board will take favorable action.

Yours respectfully,

MAX C. HUEBNER,

Per G. M.

September 6, 1895.

Hon. C. W. ADAMS, *State Engineer, Chairman Committee State Board of Health:*

Sir.— I transmit herewith my report of the results of an examination made as directed by you in connection with alleged nuisances caused by ponds of stagnant water in the village of Edgewater, Staten island, Richmond county, N. Y.

Respectfully,

JOHN BOGART,
Consulting Engineer.

The conditions forming the subject of this report were brought to the attention of the State Board of Health by a communication from a resident of the village of Edgewater, dated July 1, 1895. That communication states that for several years complaints have been made to the local board of health against stagnant ponds of water in the village, which are public nuisances and detrimental to the public health, which have been so declared by the local board of health and so presented by several grand juries. Maps and profiles have been made by the village engineer. Nothing has been done. The complainant requests an examination of the existing conditions under the auspices of the State Board of Health. He transmits copies of these maps and profiles.

The State Board of Health, on July 5th, referred a copy of this communication to the health officer of the village of Edgewater, Dr. John L. Feeny, with instructions to investigate and report. That officer replied July 30th, inclosing minutes of proceedings of local board of health in this matter. These are referred to hereinafter. Copies of two presentments made by grand juries on this subject were sent to the State Board. The matter was referred to the drainage committee, under whose instructions I have made an examination of the localities in question. I have also heard the statements of the complainant, have gone over the ground with the village engineer and have received from the health officer of the village his views on the subject.

The ponds, in regard to which complaint has been made, are in *the fourth* ward of the village of Edgewater, and in the district

ommonly known as Concord. The natural topography of this articular district forms a number of depressions, in which the ainfall collects and forms shallow pools without outlet. The rainage has also been, in places, further obstructed by street rading. Some ditches have been made, and there is a water-course onnecting with some of these pools, but the connections are ot such as to drain the particular ponds in regard to which omplaint has been made, nor are the ditches and water-course ow in a free or unobstructed condition.

The documents presented with the complaint, the report of the ealth officer of the village, the action of the local board of health nd the presentments made by two grand juries show that the nsanitary and dangerous conditions resulting from these stag- ant ponds have been appreciated and understood by the local uthorities. A consideration of some of these is necessary to a full understanding of the existing circumstances.

First. A presentment made by the grand jury, July 6, 1894, is as follows:

Whereas, It has come to the knowledge of this grand jury of the court of sessions, that in several of the localities on the island there exist ponds of stagnant water, which are detrimental to the health of the people residing in the neighborhood thereof; and,

Whereas, It has also come to the knowledge of this grand jury that the attention of the different boards of health having charge of the locality where said ponds exist, have repeatedly called to the existence of these nuisances; and, whereas, the grand jury deem it highly essential to the health and comfort of the people residing in the neighborhood of these bodies of stagnant water that some immediate measure should be taken for the purpose of relieving them from the existence of said nuisance; therefore be it,

Resolved, That the grand jury request the different boards of health wherein such nuisances may at the present exist, to immediately take measures to compel the owners, or those in charge of these bodies of stagnant water, to immediately drain

and clean or take such other measures as may be deemed necessary to abolish the nuisance complained of in their neighborhood; and in default of such action by the said boards of health wherein such nuisances exist within thirty days after the service of a copy of this presentment, the district attorney of this county be, and he is hereby, ordered to present the members of the said board of health at the next sitting of the grand jury in this county for their dereliction of duty in that behalf.

Be it further resolved, That the clerk of the court be requested to forward to the different boards of health in this county a certified copy of these resolutions.

DENNIS J. DARCEY,
Clerk.

Indorsed: Filed *July* 6, 1894.

Second. A presentment made by the grand jury, May 7, 1895, is as follows:

This grand jury having again investigated the condition of the ponds situated in or about Grasmere and Concord, in this county, and having read the presentment of the grand jury of the June sessions, 1894, we do approve of the recommendation made by them, and, as it appears to us that nothing has been done since said presentment was made, which was a remedy for the defects therein complained of, we again present the said ponds as a public and continued nuisance, and, after an investigation made as to the proper methods to abate said nuisance, we find that the easiest and most available method of performing such work to be as follows: That if the streets in Concord village where the said ponds flow, have not been accepted by the village of Edgewater, that they be immediately accepted, and that upon such acceptance, or if they have already been accepted as village streets, that the village immediately have said streets so graded as to abate said nuisances by the extinguishment of said ponds, and that when said streets have been so graded that an ordinance be enacted by the village trustees or the board of health of said village, compelling the owners of property upon the lines of said streets to so grade their property as to prevent the continued nuisance upon their lots of any of the remains of said ponds.

The district attorney of this county is instructed that if such proceedings are not taken by the board of trustees before the June sessions in this county, that then the said officials be presented to said grand jury for such action as they may deem advisable in the premises, and that a copy of this presentment be immediately sent to said board of trustees.

JOHN F. SMITH,
Clerk.

May 7, 1895.

Third. A communication dated July 30, 1895, from Dr. John L. Feeny, health officer of the village of Edgewater, is as follows:

STAPLETON, S. I., *July* 30, 1895.

Secretary State Board of Health:

My Dear Sir.— Your communication of July 5th was duly received and would have been answered ere this, but I thought it better to submit it to my own board of health before replying. Our board meets bi-monthly, and the first opportunity presented itself last Tuesday, when I officially brought it to their notice.

Although there was not a quorum present, the members in attendance instructed the secretary to furnish me with such minutes as related to the subject of your communication, a typewritten copy of which I inclose you.

Permit me also to say that, without annoying you with any lengthy communication, that you accept these as an answer to yours of the 5th ultimo.

Very respectfully,

JOHN L. FEENY,
Health Officer.

Fourth. The minutes of the board of health of the village of Edgewater relating to this matter. The copy of these minutes was transmitted with the communication of the health officer last above quoted. The minutes are as follows:

Extracts from the minutes of the board of health of the village of Edgewater, Richmond county.

MEETING OF JULY 18, 1894.

The secretary then read copy of resolutions of one Max Heubner, adopted by the grand jury in relation to ponds of stagnant water in several of the localities on the island.

On motion of Mr. Bardes,

Resolved, That the resolutions be received and placed on file, and that a committee of two be appointed, with the health officer and counsel, to examine the ponds in the village, and ascertain if they are nuisances and detrimental to public health, and report at the next meeting of the board. Carried.

The president appointed Messrs. Bardes and Mullins as such committee.

MEETING OF AUGUST 15, 1894.

Mr. Mullins of committee appointed at the meeting of July 18th to examine the ponds in the village reported that with Mr. Bardes and the health officer they made a thorough examination of the ponds at Concord, and that the health officer would make a written report on the same at the next meeting of the board.

MEETING OF AUGUST 17, 1894.

The following report of Health Officer Dr. John L. Feeny, in the matter of ponds at Concord, was read:

To the Board of Health, Village of Edgewater:

Gentlemen.—Your committee appointed to examine and report as to the sanitary condition of the various ponds and pools of standing water within the limits of your jurisdiction would most respectfully report that they have proceeded with such examination and have given most of their attention up to the time of making this report to that portion of the village situated in the fourth ward and commonly known as Concord. As to this locality they report that they found a number of small ponds and pieces of standing water, caused, in their opinion, largely by the want of proper drainage afforded for the surface water and by the obstructing and want of proper care of such drains and water-courses as now exist. They consider the whole territory bounded as fol

lows, to wit, DeKalb street, rear of Mrs. Walters; Necker avenue, north of DeKalb; east side of Necker, south of DeKalb street, opposite Grassmere and Concord hose-house, to within a block of Railroad road; Steuben street, off Mosel avenue; south of Mosel avenue and Steuben street; northerly side of Steuben street, west of Mosel avenue, rear of Holvhaux; Main avenue and Steuben street, drainage from Muller's brewery; west side of Main avenue, between Steuben and Pierce streets; Britton avenue, south of Pierce street; Pierce street, north of Oder avenue; corner of Pierce street and Danube avenue, part belongs to State; Danube avenue, near Noltes, two ponds; water-course Steuben street, near Heubners; southerly side of Vanderbilt avenue, near Vanderbilt's to be in an unsanitary condition and detrimental to public health, and would advise that the same be condemned and that the board of trustees of the village of Edgewater be notified of the condition of the said locality and the action of this board, and that they be urged to take prompt steps to remedy the existing state of affairs and make it possible for the board of health to exercise their powers in the premises with a reasonable assurance of success.

JOHN L. FEENY. M. D.,
Health Officer.

On motion of Mr. Mullins,

Resolved, That the report of the health officer be received and placed on file, and that the board of trustees be notified of the condition of said locality and the action of this board, and that they be urged to take steps to remedy the existing state of affairs.

Carried.

VILLAGE OF EDGEWATER,
RICHMOND COUNTY.

I, M. J. Collins, secretary of the board of health of the village of Edgewater, Richmond county, do hereby certify that I have compared the foregoing with the originals on file in my office, and that the same is a true copy thereof and of the whole of said originals.

In witness whereof I have hereunto set my hand and affixed seal of the said board of health, the 29th day of July, 1895.

[L. S.]

M. J. COLLINS,
Secretary Board of Health, Village of Edgewater.

As far as regards the unsanitary condition of the neighborhood, resulting from the continued existence of these ponds, I need only say that my examinations confirm the statements made by the grand juries and by the health officer. The water in these ponds is stagnant. There are no outlets for the lower parts of the pools. During a period of small rainfall sufficient fresh water does not flow into them to maintain or restore their purity. They are in an open country fully exposed to the heat of the sun. Many of them are evidently used as receptacles for the refuse and filth and decaying matter from the neighborhood.

There is a considerable population in the vicinity. A public school is in the immediate neighborhood. The old water-course, into which the drainage from some of these pools might be conducted, is in bad condition; some house sewage empties directly into it and at places it is very filthy.

I report that, as is stated by the health officer, this neighborhood is in an unsanitary condition and detrimental to the public health. Prompt measures should be taken to remedy the existing state of affairs.

The details of the measures required for this purpose can not be determined fully by the examination I have made. More thorough study and probably a careful survey would be required. But from the information given me from the health officer and by the village engineer I believe that such study and surveys have been made to some extent and could be directly completed by the local authorities. Drainage is essential and possibly to some extent filling of very low places would be desirable.

Action by the board of trustees of the village of Edgewater is the essential necessity. The local board of health has notified the board of trustees of the condition of the locality.

I advise that the State Board of Health notify the board of trustees of the village of Edgewater that an examination has been made by the State Board of that portion of the village wherein are located the ponds as to which action has heretofore been taken by the grand jury July 6, 1894, by the grand jury May 7, 1895, and by the board of health of the village August 17, 1894; that the examination shows that a nuisance exists affecting the

ecurity of life and health in that locality; that in the opinion of ie State Board of Health action should be at once taken by ie board of trustees of the village of Edgewater to abate these uisances and prevent their recurrence; that unless such action e forthwith taken by such board of trustees, the State Board of ealth will take the further steps of reporting the facts to the overnor of the State for his action under section 6 of the Public ealth Law.

Respectfully,

JOHN BOGART,

Consulting Engineer.

ALBANY, N. Y., *September* 30, 1895.

he President of the Board of Trustees of the Village of Edgewater, S. I., N. Y.:

Dear Sir.— Complaints having been made to this department f alleged nuisances existing in the village of Edgewater, caused y ponds in the streets of the village, Mr. John Bogart, consulting ngineer for this board made an investigation, and at a meeting f this board held on September 18, 1895, made his report and the ollowing are his conclusions:

"I advise that the State Board of Health notify the board of trustees of the village of Edgewater, that an examination has been made by the State Board of Health of that portion of the village wherein are located the ponds as to which action has heretofore been taken by the grand jury, July 5, 1894, by the grand jury, May 7, 1895, and by the board of health of the village, August 17, 1894; that the examination shows that a nuisance exists affecting the security of life and health in that locality; that in the opinion of the State Board of Health action should be at once taken by the board of trustees of the village of Edgewater, to abate these nuisances and prevent their recurrence: ***."

In view of the above report, you are requested to comply with the suggestion to cause the abatement of the nuisances complained of as promptly as is practicable.

Very respectfully, your obedient servant,

T. A. STUART,

Assistant Secretary.

NEWTOWN CREEK.

BROOKLYN, N. Y., *December* 30, 1895.

New York State Board of Health, Albany, N. Y.:

Gentlemen.—I respectfully submit the following report on the conditions of establishments on Newtown Creek, L. I.:

The work of the summer might be classified under two divisions, viz.: Inspection and Investigation. Under the head of the former, visits were made at regular intervals to the various plants, to insure the enforcement of the regulations in regard to cleanliness, and the proper maintenance and operation of such machinery as had been provided for the disposal of odors, etc. The daily record of these visits are on file at the Brooklyn department of health and are not appended as part of this report. Under head of investigation is included the results in the detailed reports of various establishments, copies of which have already been forwarded you. The idea in view being to have a description of machinery and processes of the more important establishments, for the purpose of being able to note such changes in equipment and operation as might be made from time to time with a view to possible future improvement in machinery and appliances for odor disposal.

The inspections commenced on June 1st, and continued regularly until the latter part of October. The factories, etc., inspected, numbered some 35 and were as follows:

(1) Preston Fertilizer Company; (2) Kings County Oil Works; (3) Queens County Oil Works; (4) J. Rosenberg; (5) Nichols Chemical Works; (6) Reed Fertilizing Company; (7) W. Hoefner; (8) Peter Cooper Glue Factory; (9) Atlantic Carbon Works; (10) Moller & Company; (11) Van Iderstein Brothers; (13) Acme Fertilizer Company; (14) Wissel's Dead Animal Wharf; (15) Night Soil Boat; (16) De Muth Glass Works; (17) Columbia Distilling Company; (18) Suttle Brothers; (19) Eastern Distilling Company; (20) Haberman Manufacturing Company; (21) United States and

Degreasing Syndicate; (22) Robinson Brothers; (23) E. V. Company; (24) Funk Brothers; (25) Kalbfleich Chemical 26) Equity Gas Works; (27) Wm. Knappman; (28) Green- emical Works.

he summer's work included some special work, such as, arious establishments at Barren Island; (2) Van Ider- at Rendering Factory in Hudson street, Brooklyn; (3) In- on of smoke nuisance at Bushwick Glass Works, a special hich is on file with Commissioner Emery; (4) American n Company's garbage disposal plant.

ore stated the daily reports are on file at the department ain the records of violation of sanitary laws and minor that were made from time to time during the period of n. They are separate and are not referred to in this r in the special ones already forwarded you.

rting at the mouth of Newtown creek and ascending same ng establishments, etc., in order met, the first thing prob- ttract the attention — especially so at low water — would akland sewer.

iscussion of this sewer together with others that have let in the creek, I will postpone to the latter part of report.

MANURE BARGES.

ite the above mentioned sewer on the Long Island City re are generally a number of barges of manure, having ge transferred to the flat cars of the Long Island Rail- mpany. The odor from this cause is quite strong, and y at night can be distinguished a considerable distance

GREENPOINT CHEMICAL WORKS.

ed in the manufacture of " iron-mass " for gas works, and blue. Some odor is to be noticed in the process, partic- the conversion of the iron sulphate to the hydroxide. charge iron chloride in the lots back of works, which of ventually find its way to the creek. They assure me that intending to introduce a method of utilizing this bye- in the near future.

PRESTON FERTILIZER COMPANY.

See special report.

VAN IDERSTEIN BROTHERS.

Engaged in rendering fat. At beginning of summer the process was similar to that used by W. Hoefner, q. v., but much better arranged and carried out. Later a change was affected for improved methods, and the process now in use is a modification of the one used by J. Rosenberg, q. v. The process is a good one, but parties are not as careful as they might be in regard to cleanliness, etc. Discharge only condenser and wash water into creek.

COLUMBIA DISTILLING COMPANY.

This concern is engaged in manufacturing alchohol from molasses. The general condition of plant is good and no unpleasant odors could be noticed. They discharge into the creek the washings of vats, tanks, etc., together with about a bushel of spent rye per diem, which is used to accelate the fermentation.

EASTERN DISTILLING COMPANY.

Manufacture whisky, gin, cologne, spirits, yeast, etc., from cereals. Plant is very large and very well kept up. The discharge to creek consists of water from various condensers, vat washings, also such liquid as comes from the spent rye and corn, when latter are subjected to treatment in hydraulic press; the press cake being salable as cattle food. The liquid from presses passes off in large quantities and is of a dark reddish color. At times there is a very noticeable odor of yeast in the vicinity of factory.

KINGS COUNTY OIL WORKS.

Engaged in manufacturing the lighter oils such as kerosene, benzene, etc., from crude petroleum. There is a very strong odor of oil about the place, especially from oils recovered from tar stills. The lighter non-condensable compounds from stills are now collected in a gas-holder, instead of being allowed to escape into air, and are used as fuel, being sufficient to maintain a 1,000

power battery of boilers. This change has undoubtedly
a vast improvement, both for proprietors and the neighbor-
Principal discharges to creek are condenser water, and
water from tanks. This latter carries with it the soda used
ifying and makes a very heavy white discharge to creek.
so escapes from occasional leaks in the various pipes.

QUEENS COUNTY CHEMICAL WORKS.

heavier distillates of crude petroleum are sent from various
oil works to this establishment to be refined and manufac-
into paraffine, candles, grease and lubricating oils. The
acid is dried and shipped being used as a fertilizer. The
passing off from tanks pass through a wooden water con-
of apparently proportionate dimensions.
design laid out for the saving of waste, is to have all drains,
ngs, etc., pass into a slip in the bulkhead. Across the slip
ating trap for the purpose of retaining the oil carried off by
ins. A steam pump located on a platform in slip and pro-
with a swivel suction removes the most of surface oil as it
ulates. Beyond the floating trap is a log boom acting as a
trap, the oil accumulating here being removed by hand
. Any oil which passes the boom it is claimed is collected
nkets. The boom is very low and as a matter of fact some
s escape, especially so when the wash from passing boats
the boom. Sulphate of soda is also discharged into the
n considerable quantities, and there are two or three other
directly into creek from lubricating department. There
rong characteristic odor of oil about the premises at all

J. ROSENBERG.

special report.

NICHOLAS CHEMICAL WORKS.

is a very large establishment, the products of manufac-
eing sulphuric, acetic and hydrochloric acids, copper, sul-
alum, etc., are also copper smelters and refiners. Acid
are the principal thing to object against in their process,

and the fumes are very considerable and very strong. In the nitric acid department it is almost impossible to enter the building, notwithstanding that the ventilation is most perfect, from there being but three sides to the structure and no window panes. The concern have promised to remedy the nitric acid apparatus, and also propose to erect a tall chimney for the reception of all noxious gases. Have a discharge to creek consisting of a sort of clay wash, it being a bye-product in the manufacture of alum.

W. HOEFNER.

See special report.

REED FERTILIZING COMPANY.

This concern manufactures fertilizers of various grades. A the material is purchased in dry state with one exception, a they are properly speaking only mixers. The material refer to consist of Charlestown rock, cream-of-tartar refuse, dri blood, tankage, potassium muriate, etc. There is considera odor to be noticed at all times, but odors are not particula offensive, with the exception of the acid treatment of tanka This latter is carried on, I believe, about twice a week and wh the wind is blowing from Brooklyn. The tankage is mixed wi sulphuric acid in a large iron vessel, and agitated by mecha cally operated stirrers. The vessel is hooded and connects with chimney, which latter extends some 12 feet above the roof. T fumes are strongly acid in character and very unpleasant muggy weather. A proper condenser would probably remove cause of complaint from this source. With regard to applianc for disposal of odors from dry material, there would seem to no practical solution to the problem which could be acco plished by a reasonable expenditure of money. The plant is extensive and the material handled in large quantities, togeth with the methods in use, that the cost of introduction and oper tion of proper appliances would be prohibitive. There are tw discharges into creek, one an overflow from a water tank, t other is a drain from low land in rear of establishments.

HABERMAN MANUFACTURING COMPANY.

Make the so-called agate ware utensils of various kinds. No
ors of any moment are to be noticed about the plant. Dis-
charge some coloring matter in small quantities into creek, also
ort of fish-oil soap in which the iron plates are dipped before
ssing. This latter is also in small quantities probably about
arrel a month.

DE MUTH GLASS WORKS.

Are not apparently causing any nuisance.

ATLANTIC CARBON WORKS.

The processes and products are almost identical with those in
by Moller & Co., (see special report), with the exception that
kage is dried instead of being treated with acid. All analogy
ses here, however, this plant being one of the worst conducted
the creek. The construction of odor disposing appliances is of
poorest, and in most every case is an actual farce.
t is intended to make this establishment the subject of a spec-
report containing full details so that it will not be necessary
ursue the subject further here.

PETER COOPER'S GLUE FACTORY.

While this is one of the largest concerns, and at the same time
of the chief offenders on the creek, it has not been made the
ject of a special report for the reason that the matter received
siderable attention at the time of their recent trial for main-
ning a nuisance, and in which case the city was defeated.
ere has been no material change in the plant since that time,
l the lime refuse continues to defile the creek. This latter,
ich is the chief cause of complaint, has been repeatedly brought
their attention during the summer, with the result that they
re engaged the services of a chemist to experiment with a view
a precipitation of the lime and thereby only having a clear
uent to deal with. During the early part of the summer they
charged the refuse in a neighboring lot of some four acres in

extent, with the result that the organic matter quickly putri
giving rise to a very disagreeable stench. This was promp
stopped and they had the lot covered over with fresh earth to t
depth of a foot.

WISSELS DEAD ANIMAL WHARF.

It is here that the dead animals and slaughter-house refu
is received prior to its shipment to Barren Island. A boat leav
every morning for this purpose. While this is a very unpleasa
spot it would seem to have its existence warranted by necessit

ACME FERTILIZING COMPANY.

See special report.

NIGHT SOIL BOAT.

This has undobtedly been the source of great nuisance in t
past, and the boat has had the reputation of having a carryi
capacity in comparison with its tonnage far exceeding any otl
vessel afloat, coupled with the report that it was towed to s
about once in three months. In the early part of June the owi
was notified to have his boat put in dry dock. This done, a th
ough examination was made by the department. She was fou
to be in bad condition, details of which are contained in a spec
report. Such alterations and repairs as were possible were ma
but the age of the scow entitles it to retirement. Since t
changes, however, matters have operated much more successful
and the trips to sea have been made about every two weeks.

MOLLER & COMPANY.

See special report.

EQUITY GAS WORKS.

This is quite a large and complete plant, but is not now in
eration.

KALBFLEISCH CHEMICAL WORKS.

Very similar to the Nichols Chemical Works, and, if anythi
they generate more acid fumes. The alum refuse is dumped

lot in the rear of the premises and does not go directly to creek. e factory is located within the city limits, and adjacent to dwel- g-houses For this reason the escape of any noxious gases is ecially undesirable.

WM. KNAPPMAN.

ngaged in manufacture of whiting. The chalk is ground in ser mills with water, after which it is run to the settling tanks. en settled chalk is deposited, it is removed and dried. They n they have no discharge to creek, and that water is used con- ously, the waste being made up as required.

TED STATES AND CANADA DECREASING SYNDICATE.

ıe process of this concern is the extraction of grease from s preparatory to tanning. The grease is extracted by naptha closed machinery. The naptha is recovered and grease sold. machinery is of good construction and modern. An odor of ha is noticed when tanks are being discharged, but it is of no t consequence. Only discharge to creek consists of condenser r.

SUTTLE BROTHERS.

ıe business is tanning of hides, which latter are received in s packed in salt and acid. The hides are then tanned in open s containing sumac, sulphuric acid and salt. The overflow ı these tanks, together with some wash water, finds its way ıe creek. In the coloring department another discharge, of a red color, is permitted to escape. Most any discharge is e deprecated at this location, the factory being amidst marshy ınd and some distance from the creek proper.

ROBINSON BROTHERS.

herwise known as the Kings County Chemical Works, manu- ıre nitric and sulphuric acids and paste. The sulphuric acid anufactured in the Glovers and Gay-Lussac's towers. Very e odor is to be noticed about the place, and parties claim to very little escape of gas. Discharge only condenser water eek.

E. V. CRANDALL COMPANY.

Make putty and whiting from chalk. No odors are to b ticed, and an occasional discharge of water with sulphuric is permitted, but have arranged to use water continually i tling tanks.

This completes the list of factories, and while the summa each has been brief, it was deemed best not to overburde report with too technical a description of the various pro and machinery, but to reserve any further elucidation you desire to be embodied in a special report. Much of the inf tion contained in this and more especially in the special repo obtained with great difficulty. While access to the vario tablishments was always freely accorded upon the exhi of proper credentials from the State Board, information o cesses was not so freely imparted. This was to be expect many of their methods are held as secret, having been arri only by considerable expenditure of time and money, and guarded from any chance of falling into the hands of po competitors. However, I believe that most of the descri will be found to be, in the main, correct.

Another feature of the work, and one I believe of great has been the series of night inspections. To this end, and to the ground, a room was hired on Ainslie street, about a mile creek, for six weeks, commencing the latter part of Augus here Mr. Locke, of the Brooklyn department, and myself to our quarters. Two special inspectors were appointed to the vicinity of the creek every night from 10 p. m. to 5 a. m. also provided ourselveswith a row-boat, to be better en to quickly reach any desired point. Further, we put our in communication with several of the chief complainants a the factories, with the request that we be immediately n upon their noticing any of the odors complained of. Every that the wind was in a favorable quarter, Mr. Locke and m were out investigating. Visits were made to the factori different hours of the night, and all odors distinguished traced finally to their source. The promised assistance an

f the citizen complainants was in the nature of a disap-
ɪnt; but, from some previous experience, not entirely un-
d. Some three or four times only were we called upon
ı; and only once was any foundation for the call realized,
n the evidence was all in favor of the odor noticed by us
ther than the one complained of. On another occasion,
ɪanding within 200 feet of a factory that was at the time
g a very disagreeable odor, we were assured that this
ɪhment had ceased to be a nuisance.

there is ground for complaint is not to be denied; but, un-
tely, the chief offender is, in my opinion, the city of Brook-
/ith four large sewers continually discharging their con-
to a narrow arm of the East river, with no current to re-
ıe refuse but the tide, the condition of affairs is not sur-

. While the tides are of considerable help in flushing
ɛk, they also act in a contrary manner by covering the low
ɪth putrescent matter on the flood tide, which is left to be
ɛd on the ebb to emit a vile effluvium. Sulphuretted hy-
is continually being given off from the waters of the creek,
low tide, when the bottom is stirred up by the propellers
ɛls, the stench is almost intolerable. At the Grand street
a very bad spot is found, due to the outlet of two large
which is uncovered at low tide. The low, marshy
around the upper part of creek, which has not been
ıded, constitutes another menace, but one which will prob-
overcome in time by filling in.

gard to the factories, while most of them can not be char-
ɛd as clean occupations, they can be improved. These im-
ents will probably never permit of their location in a
g-house district, but real estate in the immediate vicinity
town creek being so valuable for manufacturing purposes,
dency is not likely to incline in that direction. Improve-
ıt best will be toward localization of the troubles.

rary to general opinion, the bone black and bone boiling,
: the fat rendering establishments, are the biggest offend-
he odor from the precipitating tanks of these establish-

ments, and they are always operated at night, can be, under favorable weather conditions, distinguished a mile and a half away. The Atlantic Carbon Works, one of the worst of these, was closed for two months during the summer and autumn, so that very little direct evidence was obtained against this concern. A not exorbitant outlay of money on new appliances would work wonders with most of these establishments. A feature which has contributed very largely to the abatement of the nuisance in the past, has been the discovery of commercial uses for objectionable waste products, and some help is to be expected from this source in the future.

The water condenser should, in my opinion, be condemned as being of very little value, as I believe it merely transfers the odors from one place to another. There would seem to be but one effectual method of disposing of objectionable odors, and that is by burning them, and I believe this method, in lieu of a better one, should be made compulsory. Where the odors could not be so disposed of, the other alternative would be not to generate them.

In conclusion I would say, that the creek is not quite so black as it has been painted, but to quote again, "Where there is smoke there is fire," and so it has been found.

I am, your obedient servant,

JOSEPH B. TAYLOR.

Report of Joseph B. Taylor on the Factory of Joseph Rosenberg, Newtown Creek, L. I.

W. W. LOCKE, *Sanitary Engineer, Department of Health, Brooklyn, N. Y.:*

Dear Sir.—I respectfully submit the following report of the factory of Joseph Rosenberg, located on Newtown creek, L. I.:

The business of this concern is what is known as "fat rendering." The products of manufacture being tallow and "scrap," the raw material for which is meat fat and suet collected from the various butcher shops. The suet is separated from the fat and former is usually sold to the margarine manufacturers

The fat is taken to the top floor of the building and introduced into the rendering kettles. These kettles are of steel, steam jacketed and about 48 inches in diameter by 12 feet long. The charging door at top is secured by cotter bar and suitable gasket is employed in making the joint. After charging, the door is locked and steam turned into the jacket. The process requires about six hours for its completion; the tallow forming is run to an open tank in the cellar. A pipe connected with the upper part of the kettles leads gases formed to the boiler furnace to be consumed. At completion of the operation a discharging door — similar to the discharging door described above — is opened and material remaining or scrap falls into iron wagons. These wagons are then wheeled to the presses. The presses are of the screw toggle type with curb, several cakes making a pressing and the cakes being separated by iron cake plates. The presses serve to remove the remaining tallow. The tallow, as it comes from the presses, is caught in a curb plate drain, provided with a spout, which leads to a rectangular box flush with the flooring. A vertical pipe, extending above the bottom of the box, removes the tallow, free from any scrap that might be carried over into box from the press. The tallow finds its way to above-mentioned receiving tank. The scrap cakes when removed from the press are very hard, about 36 inches diameter and 4 inches thick. The edges are trimmed with a knife and they are then ready for shipment. I understand that they are mostly exported and used in the manufacture of dog biscuit. The tallow is drawn from the receiving tank to another smaller tank, and when cool is packed into hogsheads for shipment, being largely used in the manufacture of soap.

The general condition of the plant is very good, being modern in design and of good finish. The floors, with the exception of the cellar, which is concreted, are of wood, and are kept in excellent condition, being swept and washed at frequent intervals and then sprinkled with salt.

There is some odor connected with the process, first on receiving the material from the collecting wagons; this especially so in warm weather, when the fat spoils very quickly. Every effort,

however, seems to be made to get the fat into the kettles without loss of time. In cold weather there is not so much cause for complaint from this source. Another part of process where some odor is perceptible is at removal of the scrap from the kettles. It is necessary in order to remove most of the tallow during the pressing to prevent the scrap from becoming cool. The material being warm there is an odor at this point resembling somewhat that of cooked meat. Apart from these two I believe no other cause for complaint exists, and odor from these causes is not sufficient to be noticed more than about 200 feet away from factory. Carlessness would, of course, be liable to increase the trouble very much.

The kettles of which there are two, are built in the flooring of the second floor, projecting about two feet above and remainder of their length into floor below. The presses are located on the first floor. Engines, pump and receiving tanks are in the cellar. Boilers in a one-story extension. Drip from the engine and pump was at beginning of the summer collected in a sump in the cellar, it being emptied by pails when full. As this was liable to overflow and make the cellar damp, proprietor introduced an ejector, and water is removed at least twice a day with improved results.

As stated before, general condition is good, and in fact the factory is one of the best kept if not the best on the creek.

Respectfully yours,

JOSEPH B. TAYLOR.

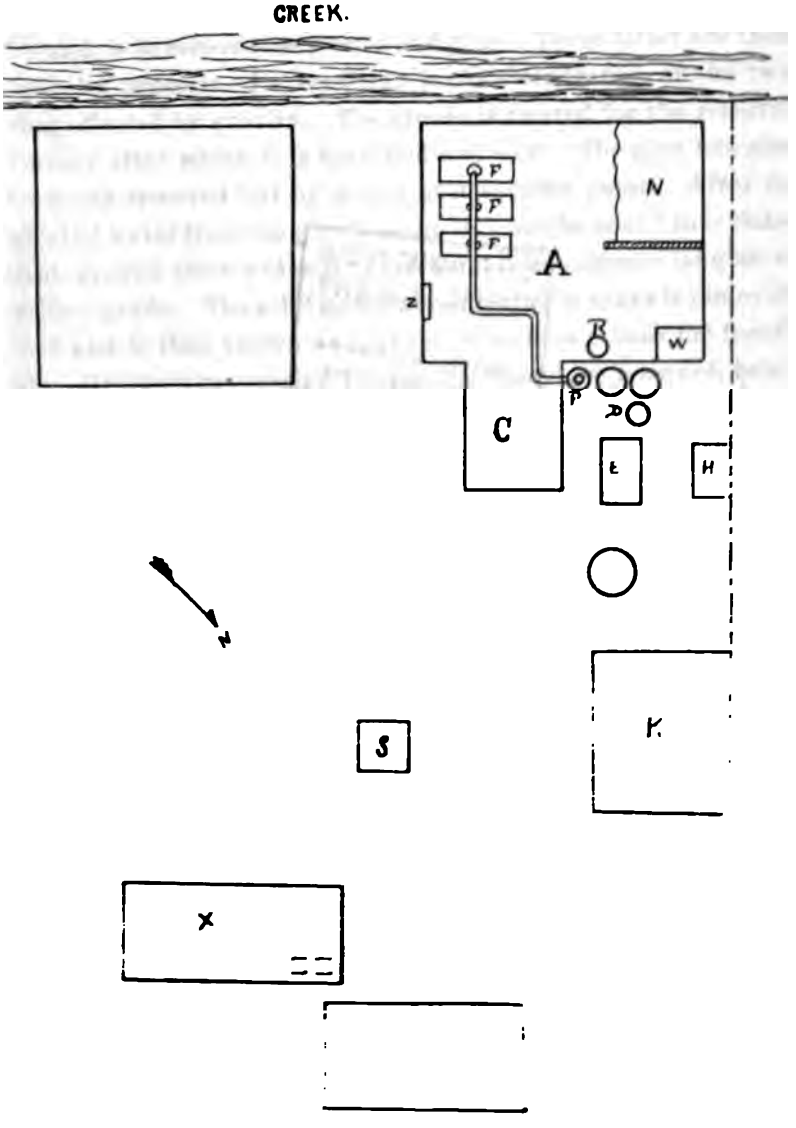
NEW YORK CITY, *October* 26, 1895.

Report of Joseph B. Taylor on the Factory of The Preston Fertilizer Co., Newtown Creek, L. I.

W. W. LOCKE, *Sanitary Engineer, Department of Health, Brooklyn, N. Y.:*

Dear Sir.— I respectfully submit the following report on factory and process of the Preston Fertilizer Company, located on Newtown creek, L. I.

The products of manufacture of this plant are fertilizers, glue, *grease,* bones, chicken feed, etc., the raw material for which is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ı butchers' slaughter-house and market refuse. On receipt
ıaterial a separation, if not previously affected, is made by
ıg the material containing a large quantity of gluten such
t, etc., from that of lower grade such as vegetable
etc. The larger bones, particularly the leg bones, are
point also set aside, the destination of which will be con-
later. The high and low grade materials are treated
ely in large closed tanks with saturated steam, the effect
h is to remove the grease and glue. These latter are then
by pressure to a receiving tank, a separation of the two
ffected by gravity. The grease is treated for the removal
r after which it is barrelled and sold. The glue has also
:er removed but by means of a vacuum pump. After re-
f water from the glue it is run into molds, sawed into slabs,
round after which it is marketable as commercial glue of
ı grade. The solid material remaining in tanks is removed,
nd is then known as tankage is used as a base for fertili-
Previous to pressing the smaller bones are removed, being
and used largely in preparation of chicken feed, but is also
able alone as " ground bone."

full details of process and whole machinery would be
: of clear description without considerable accompanying
gs, as the machinery has been added at various intervals
ıe result of experience, and the process has been altered
naptha to a steam extraction; much of the old machinery
etained to do duty for the new process. This has intro-
complications, which would not be present in a modern
by the proprietors.

ring to plate I, which is a general plan of works, (A) is
ıilding of fertilizer manufacture; (B) is the mixing house;
boiler house; (S) the pump house; (L) the office; (X) stables
rage.

ıaterial is received in building A, and at door marked Z.
fuse wagons are backed up to the door and small two-
l wooden hand-carts are run up to receive the material as
loaded. The carts when full are wheeled to the elevator

(W) and hoisted to second and top floor of building. Referring, for the moment, to plate No. 2, which is a plan of second floor of building A, (W) is the elevator shaft referred to above. The material is wheeled from the elevator shafts to the extractors (M and T). This method of receiving and handling the material from the door to the extractors is not of the best, as it requires considerable vigilance and care to keep clean about the doorway (Z) and the refuse from becoming scattered along the way by overloaded carts. This is particularly bad at the foot of the elevator shaft as an open sewer connection keeps this place in a very damp condition, which seems to favor the existence of a large colony of maggots. From Z to elevator shaft on lower floor is concreted, but upper floor is of wood. It is necessary from an economic point to transfer the material to top floor as advantage can be taken of gravity to handle material in different parts of the process. On the other hand a direct mechanical method such as flight conveyors is also open to objections of keeping clean and some of the other objections mentioned above. One thing could be done which would in my opinion be of advantage, viz.: To supplant the wooden carts by iron ones, these could be more easily kept clean, and with care in loading same, the place would be much more presentable with exception of entrance Z, the only remedy for which seems to be eternal vigilence.

The extractors (M and T) into which the material is dumped are of steel about 8 feet in diameter and 12 feet long. Are set vertically and provided with a discharging door inside near bottom, the discharging doors are of best cast iron, hinged, about 24 x 36 inches, opening and locked with swing bolts. A suitable gasket is provided for making the joint. The charging door is built in upper floor and projecting about 4 inches above same. The extractors being disposed vertically project into first floor within a few feet of flooring. The flooring about the charging door is not particularly a workman-like fit, and pieces of material are liable to fall on hot metal, thus becoming a source of odor. The charging door is somewhat small in proportion to the carts, which therefore necessitates considerable sweeping to keep the place

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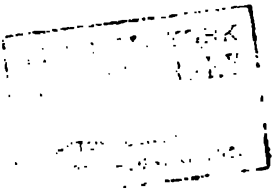

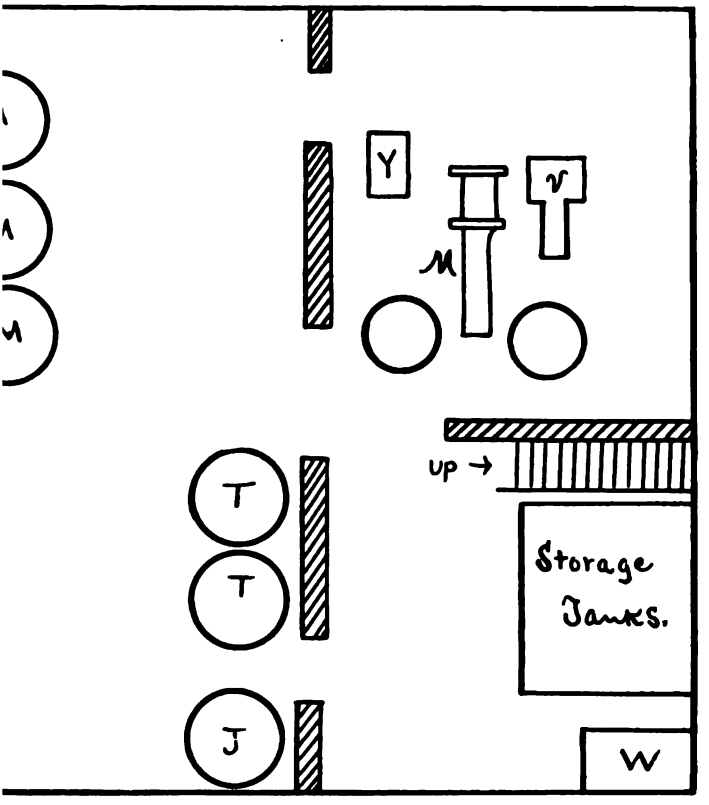
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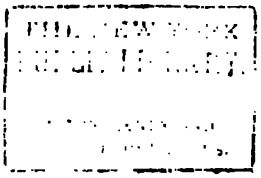

at this point. The treatment in the extractor is essentially
m one, no collecting of any moisture such as to allow of any
g is permitted. The material remains in the extractor about
six to eight hours, the grease and glue being drawn off at
'als by pressure of the steam to the receiving tank J. At
of the operation steam is shut off, and material removed by
' rakes and shovels. They have a sort of bye-pass arrange-
for quick removal of steam remaining in the extractor; this
arges into an open tub in the building. The material as it
s from the extractors is of brownish color and of a heavy
odor somewhat resembling cooked meat. The bones are
ated by hand at this point and remaining material is put
ake of bagging, which is arranged in the press (Y) so that
veral cakes which go to make a pressing are separated by
gs of wood. The press is of screw type and serves to remove
of the remaining liquid. The bones are removed to the
ng B, to be ground. The material from the press is passed
gh openings in the floor (1, 2, and 3), which same are not parti-
y tight, to the dryers F, which latter are located on the ground
f the building A. The dryers are cylindrical steam jacketed
s about 5 feet diameter by 12 feet long, arranged with
axes horizontal a shaft with mixes arms passes through the
and is revolved by gearing. The province of this machine
name implies is to dry the " tankage " by removing the mois-
The steam jacket keeps the material heated and from the
f each dryer — of which there is a battery of three — an 8
branch pipe connects with the main line. Through the pipe
oisture is conveyed to the condenser P, or reserve condenser
irculation is also aided by a steam jet in pipe. The con-
r is of ordinary tube surface variety, the gases passing
gh tubes and from thence by pipe to the furnace in boiler
S. After about six hours' treatment in dryers, material is
l off through the discharging doors in the bottom and re-
l to the mixing department in building B, or stored at N in
ng A. The pipe leading from the dryer to condenser is not
satisfactory condition as might be, but much better than at

first part of summer. The getting of fumes to boiler furnace is not vital to the process, so that concern are not as interested as they might otherwise be. The glutinous material formed during the process in the extractors is drawn from the receiver J as wanted, and sent to the Yan Yan machine (Plate 3 U), for removal of the moisture. The interior of machine I have not seen, but exterior consists of cylinder about 24 inches in diameter and 15 feet long, disposed horizontally. Within the cylinder I understand the glue travels by gravity back and forward on numerous shelves or trays. The cylinder is connected with a vacuum pump V, which removes moisture as formed. All the above-named apparatus is on first floor as shown on plate 3. On removal of the moisture from flue, the latter is run into molds and cooled. This cooling is done in the ice-box H, and water tank E, in warm weather. The water tank E, is supplied with running water, the overflow going to the sewer in elevator shaft. After the glue is cooled it is removed from the molds, sawed into thin slabs and laid on racks of wire cloth. These racks are piled on wagons and submitted to a further cooling by air in rooms O, O, on top floor by the aid of a fan blower. After it is dry it runs by a chute to the first floor passing through the glue mill previously to barreling. Glue which is too poor to treat in Yan Yan is generally introduced into the dryers with the tankage. Very poor glue material, I am led to believe by certain indications is permitted to run into the creek. The grease has water separated by machine G, and is then run to the ground floor to be barrelled.

The separated leg bones above referred to are first washed in the tanks I, followed generally by a rinsing in the tank in building X. After which the bones are sold to be made into tooth brush handles, etc. The washing above referred to is really a soaking and requires considerable time for its completion. The wash water is permitted to run into the creek.

The corner formed by the building A and C, is a bad spot, as considerable water is continually running into the vats D, located here, no provision being made to properly remove the overflow, which results in keeping the place in a very damp condition. In C are located the engine and pump.

In building B, where the fertilizers are mixed there is considerable dust and the usual odor of dry fertilizers.

In general the business is necessarily a dirty one, and proprietors could with their knowledge make numerous improvements in a new plant, which could not so easily be done with the present one. But there are numerous points in which the present process could be greatly improved from a sanitary standpoint.

Respectfully yours,

JOSEPH B. TAYLOR,

BROOKLYN, N. Y., *October* 23, 1895.

Report of Joseph B. Taylor on the Factory of W. Hoeffner, Esq., Newtown Creek, L. I.

W. W. LOCKE, *Sanitary Engineer, Department of Health, Brooklyn, N. Y.:*

Dear Sir.— I respectfully submit the following report on the machinery and process of W. Hoefner, Esq., whose factory is located on the Queens county side of Newtown creek, L. I.:

The material treated is fat, and the products are tallow and "scrap." The business is known as fat rendering, and the appliances are unique in being about the last of their kind in use in this line of business on the creek.

The rendering or melting the fat is performed in an iron hemispherical kettle about 7 feet in diameter. This is set in brick work and provided with grate bars for burning coal beneath the kettle. On top of the kettle is a sheet iron hood. This is in shape, cylindrical, capped with the frustum of a cone and having a galvanized sheet iron pipe—about 12 inches in diameter—leading from the top of frustum; the latter tapering to meet the size of pipe. In the side of hood a door is provided for access to the kettle. The fat is introduced through the door to the kettle and under the influence of the fire the rendering takes place.

The fumes which arise during this process—and they are quite considerable— pass off through the pipe from top of hood. This

pipe leads the fumes to the condenser. The condenser is of wood about 4 feet in diameter by 7 feet long,, and set vertically. While never having seen the interior of the condenser, I understand that its construction is such that the gasses come in contact with water, broken into a spray by means of a perforated plate through which it passes. The gases coming in intimate contact with the water are supposed to be absorbed by the latter, finding their way out the discharge pipe in bottom of the condenser to a well located in the cellar of the building.

This well serves a two-fold purpose, it is both the source of supply and relief for the condenser. A steam pump draws the water from the well, sends it through the condenser, and gravity returns it to the well again. In the line of pipe from which connects the kettle and the condenser, there is provided a steam jet whose province it is to maintain a draught and insure the prompt removal of the gases from the hood of the kettle. When the water in the well has become sufficiently befouled— a rather difficult calculation—the pump connections with condenser are removed and the delivery pipe is connected to a wooden tank, located outside the building. The contents of the well are then transferred to the tank. This tank is connected with the feed pump of the boiler, which supplies steam for the draught and condenser pump.

At the completion of the process of rendering, the tallow is bailed out of the kettle into small iron tanks to cool. On its arrival in the latter condition, it is put into hogsheads and shipped.

The " scrap " is that portion of the raw material that does not become tallow during the process of rendering. It is removed from the press kettle and pressed in a hand screw press for removal of any tallow that may be adhering, and also for the purpose of getting the scrap in handy form for shipment.

The scrap when it leaves the presses is in shape of a cylindrical disc, about 40 inches diameter by 4 inches thick. It is used largely in the manufacture of dog biscuit.

Another process carried on is the salting of calf skins. The skins are purchased from the butchers and piled on the floor of an outhouse with a profusion of salt. About a week is required for

eatment, at the close of which time they are sold to the
s.

ıy opinion, the methods provided by this concern for the
al of odors are of no great practical use. The kettle hood
and further, this method of condensing would seem to be
transferring of the nuisance from one place to another.
sign is not very good, but the construction, from a mechani-
nt of view, is worse. It is actually necessary to disconnect
ping between pump and condenser, to permit of pump-
t the well. Proper provisions are not made for a proper
tion between the pump and the yard tank. The present
l of accomplishing this is by means of an ordinary garden
which is coupled to two-inch (about) delivery pipe of pump,
tring and bagging.

ıaving to go to the extra expense and time of getting up
in a boiler for the disposal of odors, the temptation must
at to use it only when necessity demands, which is at the
f an expected visit of the health department. The method
lering in use by some other concerns would seem to meet
ove objections, and from appearances have also the advan-
f being a more economical method where any amount of
al, other than in very small quantities, is handled.

he other hand, the plant is such a small one, consisting as
of only one kettle, that any odor that could arise during the
s would not be of any great moment by itself.

Respectfully yours,

JOSEPH B. TAYLOR.

YORK, N. Y., *November* 7, 1895.

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of Joseph B. Taylor on Machinery, Etc., of the Acme Fertilizer Co., Newtown Creek, L. I.

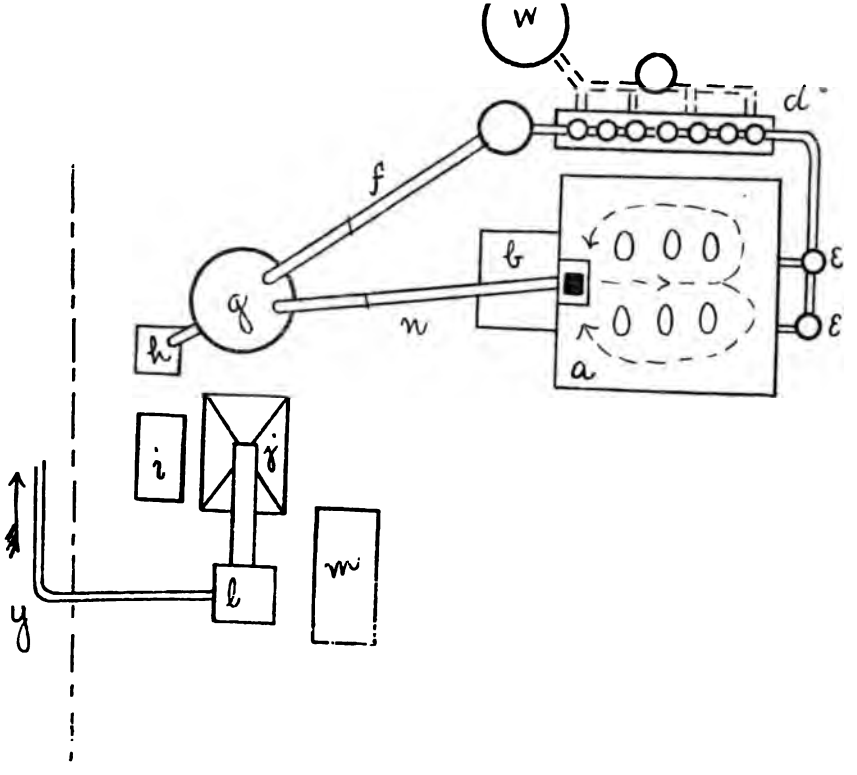
October 12, 1895.

LOCKE, *Sanitary Engineer, Department of Health, Brooklyn, Y.:*

Sir.— I have the honor to submit the following report on chinery, etc., of the Acme Fertilizer Company, Newtown, L. I.

The plant has two products of manufacture, viz., bone black and ammonium sulphate. The former is sold under its name mostly for refining purposes in sugar works; the latter is mixed with various other materials to form the different grades of fertilizers; the ammonium sulphate supplying the necessary ammonia upon the percentage of which the value as a fertilizer is based.

The raw material is composed principally of dry bones, which are generally imported. A small amount of "green bones" are also utilized. Green bones are such as come directly from slaughter-houses, but may be boiled first to recover the grease. I will give first a brief general description of the process. The bones are introduced into retorts (a) which are surrounded by flames from the furnace (b). A distillation takes place, the gases generated passing off by the pipes (ee) to the air condensers (d). In the condensers the tar and a portion of the other gases are condensed, finding their way to the well (w). From the large air condenser (c) the gases pass by the pipe (f) to saturating (g). The flow of gases is maintained by a steam jet in pipe (f). The gases pass through the sulphuric acid which is in the tank (g); the ammonia being converted into ammonium sulphate, the remaining gases are led off by the pipe (n) to furnace, passing around the retorts to the chimney (x). At completion of the operation, the liquid in tank (g) is drawn off into precipitating or boiling tank (j). At (h) is the overflow tank, into which any excess of liquid from tank (g) passes. The liquor in tank (h), together with such remaining liquor from well (w), after the tar has been removed, are run into tank (j). The liquor being in this tank is boiled by means of steam coil, the vapors formed passing off by pipe (k) to water condenser (l), the solid matter in solution remaining behind. The vapors are acted upon by a spray of water in condenser (c), which latter has an outlet drain at (y) at bottom. The solid material is removed from tank (j) to table (m) to drain off excess of liquid. Further draining is done in small open cans. The material is then ready for mixing with other fertilizers. The material remaining in retorts is taken out, ground, screened and bagged, being then know as commercial bone black, and is ready for shipment.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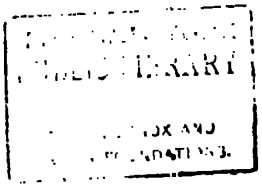

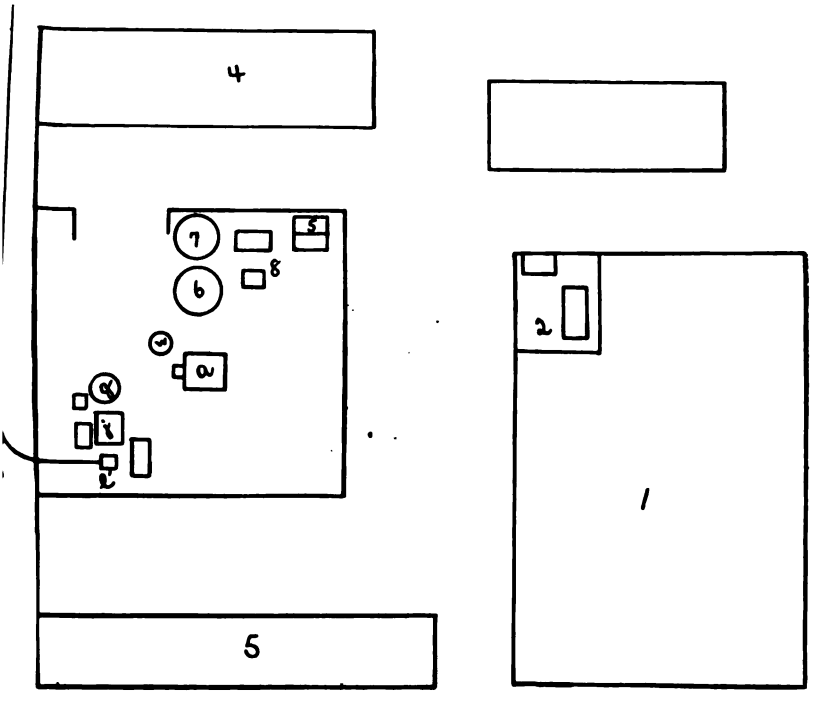
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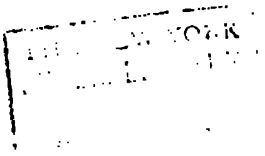


RETORTS.

here are about six or eight of these, being built of fire-brick. furnace is at (b), the flames passing in direction of arrows und retorts to chimney (x). The charging doors of retorts are t-iron covers, the joint being luted with fire-clay during burn-. The discharging doors in bottom are also of cast-iron but kept in position by cotter bars. Have found that the luting h fire-clay of doors to be generally satisfactory, and there would be much tendency to leak with the artificial draught used to intain circulation. Further, the owners are interested in ing all the gas generated and they may be relied on under the cumstances to see that the luting is done in a proper manner.

AIR CONDENSERS.

The pipes (ee) lead from retorts to the condensers (d). Con-nsers are of cast-iron, about 8 inches in diameter and 18 feet gh. The arrangement of flow is similar to that of a box-coil pipe, the connections at top being by means of branch pipes, d at bottom through an iron base box. At the end of line is a ge condenser (c), about 30 inches in diameter. The air con-nser is, I understand, very old, having, I am told, done duty about 20 years. Many of the cap joints are luted with fire-y, an arrangement that would require careful watching to pre-nt leaks. A large part of the tar condenses in the base box ferred to above and finds its way ultimately to the well (w).

STEAM DRAUGHT.

This is arranged on the principle of an injector, its use being maintain a draught through condensers and aid in forcing the ses through the acid in saturating tank. It has also a connec-n to atmosphere by a vertical, tapering pipe, through which is drawn. Any failure of draught would be indicated by the ite gases passing off from pipe. This, of course, would permit escape of odors only by an accident. I have been told that is air pipe is a necessity, but believe that it also fills the position a safety alarm. From numerous personal examinations I have ways found appreciable suction and no escape of odors.

WELL.

Referring again to this point, I would say that top is on level with ground, it being provided with a wooden cover. No attempt is made to have it odor tight, any odor from tar easily finding its way to atmosphere. The tar is drawn off at frequent intervals, being stored in open tank in boiler-room and fed from same to boiler as fuel, its composition being such as to render it valuable in this respect.

SATURATING TANK.

This is of wood, internally lead lined and about 6 feet diameter by 7 feet high. It has a wooden cover, efforts having been made to have same sealed. The province of this tank is to allow of the chemical union of ammonia with the acid—with which the tank is filled—for the formation of ammonium sulphate. The gas pipe (f) dips beneath the liquid in tank, allowing gas to pass up through same. The ammonia having been removed, the remaining gases find their way to furnace by pipe (n). The pipes (f and n) are very old, luted in many places with fire clay and indicate poor mechanical construction. It will be understood that all gasses leaving the saturating tank have ceased to have a commercial value.

OVERFLOW TANK.

This is situated at (h) and connected to saturating tank by an L-shaped pipe. Its province is to provide an outlet for excess of liquid from saturating tank, caused by ebullition or chemical union. At the angle of the L-shaped connecting pipe, is a plug to permit of cleaning pipe. This plug is a very loose fit and the usual method of making joints with fire clay is adopted. On one occasion I found plug out and gases escaping.

BOILING OR PRECIPITATING TANK.

Located at (j). The liquids from tanks (h and g) are introduced here and boiled for recovering the ammonia sulphate as a solid. The tank is lead lined, and the heating is accomplished by a lead steam coil in bottom. The tank is about 9 feet by 6 feet

by 3 feet high. It has a wooden cover, in form resembling a rectangular pyramid, the apex terminating in pipe (k). Access is had to tank by two wooden hinged doors, located on opposite sides of cover. The operation requires about eight hours for its completion, after which it is ladled out upon table (m) to drain and dry. The cover of tank is in very bad condition, and has probably been in service for a number of years. It leaks very badly at seams and joints, and although some efforts are made to close these with clay, they are not entirely successful. Moreover, the use of condenser and cover adds greatly to time and expense of operation of boiling—due to initial condensation in tank—the temptation to run this part of process without proper sealing must be very great on part of careless employes or unscrupulous owners. The superintendent of factory has lately informed me that it is the intention of the company to replace this tank by a new one, but built on same plans and of same material as present one.

WATER CONDENSER.

This is shown at (h) and is built of wood, partially lead lined, about 4 feet square and 20 feet high. At top of condenser is a lead diaphragm plate, perforated with many small holes about one and one-quarter inches in diameter. Upon this plate from about one and one-quarter inch pipe, water is discharged, which, passing through the perforations, drops to bottom of condenser, passing off by drain (y). As before stated, the gases and vapors enter by pipe (k) and meeting this water spray, are supposed to be condensed. The principle of this apparatus, though properly one to be passed upon by a chemist, I believe to be wrong, and could be improved from a mechanical point if not from a chemical one. From the chemical side it becomes a question as to the solubility of gases in water. Are all of them so, and is the solution permanent at the highest temperature to which the drain water is likely to be subjected during the summer season? If these gases, or even some of them, are not absorbed or do not remain so, the process is merely a transference of the odors from interior of factory to the outside. This condensed water has been found to have some

odor, so the question is partially answered. The ammonium sulphate is finally taken from drying tables (m) and from draining cans to the mixing building No. 1 to be made up.

The bone black remaining in retorts is drawn off into iron cans, which are immediately covered and luted to prevent whitening of the bones. When cool, these cans are opened and bones are ground in mill, and afterward screened (8) and bagged, being then ready for shipment.

At (6 and 7) are two bone-burning kilns, being the remains of the old process of bone black production, when black was made in pots and ammonia was allowed to escape to atmosphere. They are now used as dust collectors for the bone mill and screens.

At (5) are the steam boilers. At (2) is indicated the steam engine and water condenser pump. At (4) are sheds and at (5) are shown more sheds, utilized for the storage of dry bones.

The drain (y) before referred to, connects with one from the factory of Moller & Co., which latter leads to the creek. The joining of the two drains is indicated on sheet No. 9.

The above, I believe to be a generally correct report of process and machinery and appliances of factory at present date. I have further details which I can submit if you think necessary.

Respectfully yours,

JOSEPH B. TAYLOR.

Report of Joseph B. Taylor on the Factory of Moller & Co., Newtown Creek, L. I.

The products of manufacture of above concern are, bone black, grease, and fertilizers. The processes can best be described by dividing under two heads, viz.: Bone boiling and bone black. The product of the former being grease and tankage, of the latter bone black and ammonium sulphate.

BONE BOILING.

The raw material consists of slaughter-house and butcher refuse. The material is received from carts at the shed (E), where the material is dumped into a flight conveyor (I), being raised

thereby to second floor of building (D), thence by a second conveyor at right angles to first, is discharged into several hoppers leading to charging doors of boiling tanks (3, 3, 3). These tanks, or better kettles, are of wrought iron or steel about 5½ feet in diameter, by 7 feet long. The charging doors are of cast iron, closed with hinged bolts and with suitable gaskets. At sides of kettles near bottom are the discharging doors, similar in design to the charging ones described. After material is in kettle the door is closed and steam and water is admitted to the tank. The process at this point is a boiling of material for extraction of grease, and continues for from six to eight hours. From top of kettle there is an outlet pipe about 1½ inches, leading to a main line (5), which latter connects with the condenser (6). The connection between each kettle and main line can be opened or closed at will by means of a valve. The object of this pipe is, I understand, to relieve any undue pressure, and is said to be kept closed excepting at beginning and close of operation.

The object of the condenser is to dispose of such odors as are given off while valves are open. At completion of operation the discharging doors of tanks are opened and grease is skimmed from surface by ladles, and then emptied into a tin funnel which discharges to a trough (6) beneath the floor where it runs to a receiving vat (7). After skimming, the water remaining is run off by means of a pipe in bottom of kettle, to a trough formed in cement of ground floor. This trough connects with open rectangular tank (9). The solid material remaining, is removed from kettle through discharging doors, and is put in presses (10) to remove remaining water. This expressed water finds its way to tank (9), by means of cement trough. Most of the bones are separated from press cake, some being removed before pressing to be used in the manufacture of bone black. This press cake is known as tankage, and is utilized as a base for fertilizers. Having described process in general a more detailed description of construction of various parts will follow.

FLIGHT CONVEYOR.

This contrivance for raising material from point of delivery to second floor is made mostly of wood. It consists of a wooden chute along which the wooden flights, driven by a link belt travel. The principal objection that can be raised against this piece of apparatus is the head delivery. At this point through the improper construction pieces of material are thrown clear of second, or tank conveyor, and find lodgment on beams of building and in yard below. Have several times had occasion to have this part of plant cleaned up.

THE SECOND CONVEYOR.

This is very similar to the other, only that it is level and feeds the tanks or kettles by means of wooden hoppers. These hoppers are somewhat too large for the charging doors and material is frequently thrown clear of doors onto the kettles and floor; thus requiring extra care in sweeping and cleaning.

THE KETTLES.

These are well constructed for the purposes of boiling and I have reason to believe that no odors can escape during the process except through the channels provided for that purpose. However, it is impossible to prevent the odor as the material must be discharged at completion of operation, it being dragged out as before mentioned by rakes through the lower door onto the floor previous to being pressed up.

TANK CONDENSER.

This condenser receives the gasses from kettles by the pipe (5). It is in cross section about 12 inches square, made of wood; and extends from upper floor to lower, a distance of about 13 feet. The lower end is open and is directly over the cement trough. The upper end is closed by a perforated wood partition, situated about 12 inches from top end. A pipe from pump (20) delivers water on the partition, the water passing through the perforations is supposed to condense the gases. To my mind this device is of very little use and is merely transferring any odor from one place to another.

THE PRESS.

The press is of ordinary hand power construction provided with a curb. The material from kettles are pressed here, and while the press is not an actual source of odor it is a cause of its prolongation by time required for pressing.

RECEIVING VAT.

A wooden vat for reception of grease about 5 feet in diameter by 5 feet 6 inches high. The grease is here washed and treated with steam, and as there is no cover, odor is perceptible.

GREASE TANK.

The grease is run to this tank from vat and is here barrelled. Tank open and made of iron.

SEPARATING TANK.

Receives water from kettles and condenser. Any grease not removed by regular method is here collected and skimmed off. The remaining water is removed by a steam ejector or siphon (11) and goes to main drain (12). This tank is open. In general this department has a very bad odor at all times, resembling somewhat that from a pig-pen. The process is a very filthy one.

BONE BLACK.

The raw material for this process consists in part of such bones as are separated from tankage, but principally of dry bones that are imported.

The bones are introduced into vertical clay retorts (13), around which circulates the flame from coal furnace. The gases are vaporized and pass from the retorts to the iron manifolds (14, 14), any gases that are condensed in the manifolds find their way by gravity to the well (19). The uncondensed gases pass by a pipe to the air condensers (15). Such condensation as occurs here is also run to the well. The gases on leaving the condensers pass by a pipe to the saturating tank (16). In the pipe line between air condenser and saturating tank is a steam jet for purpose of maintaining a draft. The saturating tank is filled with sulphuric

acid; the pipe from condenser dripping beneath the surface of acid thus allowing the gas and acid to become intimately mixed. The ammonia in the gas unites with the acid to form ammonium sulphate; the unabsorbed gases bubbling up through liquid pass through a pipe to the water condenser (21). The last mentioned pipe is coupled with a coil in the condenser, the coil extending upward about 10 feet, thence out of condenser to a pipe (22) where gases are led to retort furnace to be destroyed. A spray of water is falling in the condenser on the coil, thus insuring circulation of the gases. After the gases have been distilled from the bones, the latter are emptied from retorts through doors in the bottom, into sheet iron cans. A cover is immediately placed on can and joint luted with clay, and they are then set aside to become cool. After the proper temperature is reached the covers are removed and contents are dumped into the mill (25). By means of bucket elevators the ground material is passed over shaking screens (26) of various meshes to be sized and sorted. It is then bagged ready for shipment as commercial bone black.

At (17) is situated the overflow tank which is connected to the saturating tank (16). Its function is to remove a part of surplus liquid at any time when the agitation in the saturating tank becomes excessive. In the well (19) have been collected the condensations from various points previously referred to. This liquid is chiefly bone tar, but carries also some ammonia liquor. The bone tar by virtue of its specific gravity separates from the ammonia liquor, and the latter by means of small hand pump is sent to the precipitating tank (18). The tar at beginning of summer season was removed and dumped into pits in rear of premises; pits being filled in when full. On complaint, however, of the odor, this practice has been discontinued, and tar is now used under the steam boilers as a fuel. The saturating and overflow tanks and well are all connected with the precipitating tank (18). This latter tank is lead lined, and has a lead steam coil in bottom for purpose of evaporating any liquid introduced. When the acid in the saturating tank is about neutralized, the contents together with that of the overflow tank, and ammonia liquor of well, are all run into the

precipitating tank; steam being turned on the coil. The precipitating tank is hooded and has a connection to the water condenser. As the liquid evaporates the vapor passes to condenser and mixes with the spray of water, is condensed, dropping to the bottom and passes off by the drain (24) to the main drain (12). As evaporation continues, the ammonium sulphate is precipitated and ladled out upon the drying table (27) to drain. It is then removed and mixed with other fertilizers.

BONE RETORTS.

These are made of fire clay, rectangular in shape about one foot by two foot, with corners rounded. They are covered on top by a loose iron cover which is luted with fire clay during the operation of burning. The discharging doors are also of iron, hinged and locked with a cotter bar. No leaks or defects need be looked for here other than accidental ones, as the products of distillation have considerable value and the manufacturer is of course interested in the safe arrival of all gases at the saturating tank.

MANIFOLDS.

Are of iron and well constructed.

AIR CONDENSERS.

Are also well constructed. Are constructed of sheet iron. Consist of a pipe of about 12 inches in diameter, inserted in a 24-inch pipe, the annular space being closed at each end. There are about four of these condensers, the gas circulating in the annular space between the two pipes. Passing in the top of a condenser and out the bottom or vice versa. The space of inside of smaller pipe is used as additional condensing surface.

WELL.

This is beneath the floor level and has merely a wooden cover over it, no attempt being made at a tight joint. As bone tar has a very penetrating odor it is a source of nuisance.

SATURATING TANK.

Of wood lead lined about 5½ feet diameter by 6 feet. Sealed cover and may be assumed to be fairly tight as the arrangement for circulation would render this almost necessary. The piping at this point is not good, some of it being galvanized and showing the effects of wear and tear. Several leaks that have occurred have been patched with clay.

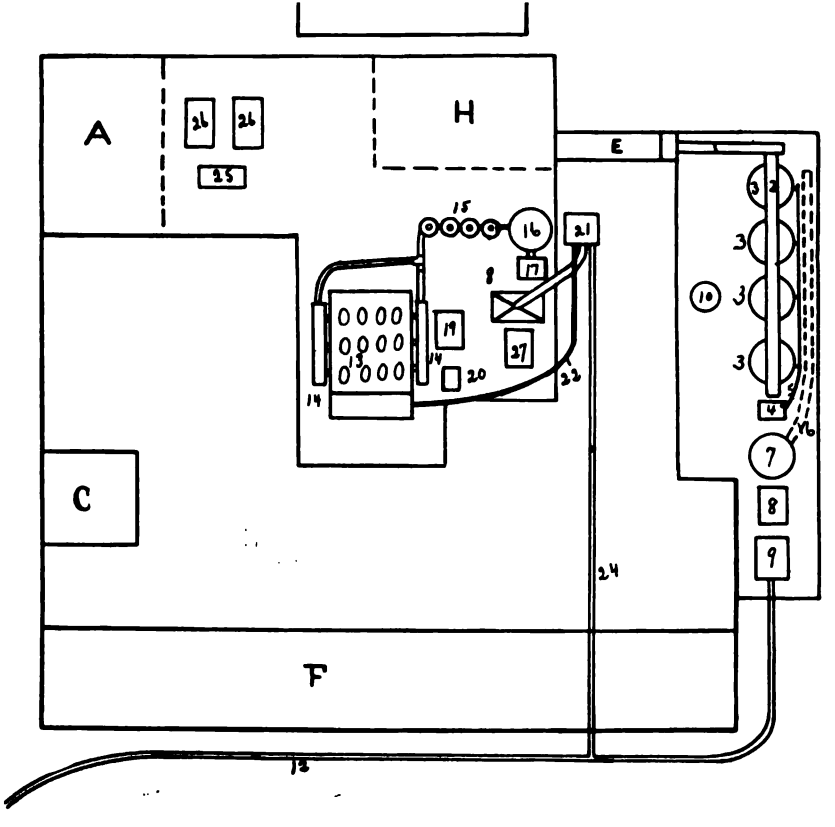
PRECIPITATING TANK.

This is improperly constructed as regards the disposal of odors; in fact inadequate to remove the odors generated. The tank is about 5 feet by 7 feet and 3 feet deep. It is surmounted by a wooden hood shaped like a rectangular pyramid and terminated at the apex by the pipe leading to the water condenser. The hood leaks and the indications seem to be that pump that supplies the condensing water is not of sufficient size to insure a complete removal of the gases. Moreover to my mind this method of condensation is open to the same objections as given against condenser (4) in the bone bolling department.

I understand by conversation with foreman of factory, and it is borne out by reason, that the hood before mentioned condenses so much of the gases and vapors evaporated that the time necessary to complete the operation is increased from two to three times, compared to where the evaporation is done in an open tank. The temptation to run with the hood doors open must, therefore, be very great.

WATER CONDENSER.

Condenser is in fairly good condition. Condensation as applied to saturating tank has, I believe, no serious objections, and providing that due care is exercised in regard to leaks, etc., and that no connection to atmosphere is allowed. There is a plug in the pipe (22) that would permit this. The condenser is by no means the best that could be devised for the purpose, but it is fair. It is of wood about 4 feet square and 20 feet long.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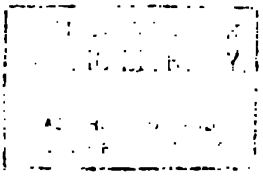


PUMP.

This pump shown at (20) is rather small for the work required s it supplies water to both condensers (21 and 4) and also cools ıe furnace door setting to bone black furnace. Their tendency ıs been not to run it to its full capacity, the latter being at least ɔeded for odor disposal.

MILL AND SCREENS.

Much dust is noticed here and some odor, but could hardly be ılled offensive.

Some odor is noticed when discharging the burnt bones, but as is necessary to keep them from the air at this stage they are ›on luted up in cans.

In building (E) and at (H) the tankage from bone boiling is 'eated with sulphuric acid. The tankage decomposes very ıpidly and has a very bad odor unless soon treated with acid. uch treatment does not, however, entirely destroy the odor.

At (A) are the boilers (steam) and engines. (C) is the office and ') is a shed for the storage of bones.

JOSEPH B. TAYLOR.

BARREN ISLAND.

ınnual Report of Arthur Hollick Upon the Industries Located on Barren Island.

NEW BRIGHTON, N. Y., *December 26*, 1895.

ɨ. T. SMELZER, M. D., *Secretary New York State Board of Health:*

Dear Sir.— In accordance with your instructions I have pre- ıared the following report upon the industries located on Barren sland, based upon inspections made during the present year, rom May to December, according to the terms of my appointment ıs inspector.

Regular inspections were begun last May, although several visits were made to the island previous to that time. Weekly inspections were made during the summer, and subsequently every two weeks, until the end of October. The last inspection was made December 2d.

Reports were transmitted from time to time during that period.

The following factories are located there:

E. Frank Coe Co., fertilizers; office, No. 137 Front street, New York.

Barren Island Fertilizer and Oil Works, fish factory; office, 22 Burling slip, New York.

A. Wissel & Co., offal rendering; office, 163 Tompkins avenue, Brooklyn.

Thomas F. White, offal rendering; office, 41 Peck slip, New York.

E. FRANK COE CO.

Manufactures fertilizers from phosphate rock, fish scrap, spent bone black from sugar refineries, crude sulphate and chlorate of potash, etc., mixed with "recovered" sulphuric acid. Whatever odors are produced are due to the mixing, and extensive appliances have been introduced to control these during that process. Hoods and conduits, connected with a fan blower and water-spray tower, are provided, but after mixing had commenced this autumn I found the fan blower disconnected and not in use. Upon calling attention to this I was informed that only a limited amount of mixing had been done, which was carefully timed so as to take place only when the wind was blowing off shore. No mixing at all was done from the beginning of June to the end of September.

Formerly "sludge acid" from the oil refineries was used, which had to be treated at the factory by agitating with water, in order to separate the tar. This caused more or less of a nuisance. At the present time the oil refineries find it worth while to perform the work of separation so as to obtain the tar for fuel, disposing of the "recovered" acid in a condition ready for use at once by the factory.

ARREN ISLAND FERTILIZER AND OIL WORKS.

nufactures fish scrap and fish oil from "menhaden." The od of treatment is to boil the fish as soon as received, by s of steam, in large wooden vats. The boiled fish are then ed, in order to extract the oil and moisture, which are allowed nain in settling tanks until cool, when the oil is skimmed the surface.

resulting "scrap" is spread upon board platforms and dried open air. The factory is arranged so that all the cooking an be covered and connected by means of a conduit and fan r with the furnace fire. If the fish are fresh when subjected boiling process little or no nuisance arises, but fish which ale give rise to more or less offensive odors, which require controlled by means of the conduit, blower and fire.

drying process always gives rise to more or less odor, which a minimum in dry, hot weather, when the "scrap" dries ly; and is at a maximum in wet weather, when the material has to be accummulated in heaps, awaiting more favorable tions.

first fish were brought to the factory on May 25. The last g was done on October 31. During the season 24,005,700 ere treated.

entirely new drying platform has been laid (1,000 feet long 0 feet wide) and a new scrap shed constructed, besides new its connecting the cooking vats with the furnace fire. The y ought to be in better shape next season than at any pre- time.

two occasions my attention was called to complaints having made in regard to odors from the island. On the first occa- he plant of this company was in an unfinished condition, to repairs being made, and the conditions were such that sance may have arisen. The conduits were not connected onsiderable wet scrap had accumulated, some of which was in a shed. I had to insist upon this being removed and as soon as possible, and warned the proprietor not to permit ing of the kind to occur in the future.

Other parties must have visited the island at about that time and noted the condition of affairs, as shortly afterward the proprietor was arrested for maintaining or causing a nuisance. I was subsequently summoned before the Kings county grand jury to testify in the case, but, after attending two days at court, was not called. I have not learned anything in regard to the final disposition of the matter.

On the occasion of the second complaint I failed to find any definite cause for it, and could not place the blame for the alleged nuisance with any one factory. In each instance these complaints came to me second hand, and some time after the trouble had taken place.

A. WISSEL & CO.

This firm conducts a general rendering establishment. It has the offal contract for Brooklyn—that is, collects all the dead animals, slaughter-house refuse, etc. This material is transported daily by means of a steam lighter, and is rendered in large, closed, wrought iron tanks by means of steam. Suitable appliances are provided for the condensation of the vapors by means of cold water, and their final incineration in the boiler fire. After cooking, the large bones are picked out and the "scrap" is pressed and dried in a revolving steam-jacketed cylinder. The dried scrap is entirely free from offensive odor and is sold to manufacturers of fertilizers.

According to the report given me by Mr. Wissel, the average amount of material handled per day is 7 horses, 50 small animals, 3 tons of slaughter-house refuse and 500 pounds of fish offal.

The principal nuisance arises during the handling of this material, between the time when it is unloaded from the lighter and placed in the rendering tanks. In summer it is generally offensive when it arrives at the factory, and there is always more or less nuisance during the process of skinning and dismembering the animals. The main thing to be insisted upon is that this process shall be conducted as expeditiously as possible.

At present there are nine rendering tanks with a capacity of 10 horses each, which is considerably in excess of the work which the factory is required to meet.

THOMAS F. WHITE.

. White also conducts a general rendering establishment a much more extensive scale, however, than that of Wissel . He has the offal contract for New York, and also takes efuse from the hotels belonging to the Hotel Proprietors' Association.

e plant has 30 rendering tanks, with an average capacity of rses each. Mr. White states that he is now handling about ons of material per day, and that this was much greater in the ner. The material is all transported by means of a steam er, and, as in the case of Wissel's factory, the only nuisance n is sufficient to reach any distance is caused by the handling e material on its arrival.

is establishment, both for extent and effectiveness, has few s, and for cleanliness and freedom from offense is far in advance of any with which I am familiar.

general, I would say, that the firms located on the island always been willing to listen to any suggestions, and apparently have been anxious to do whatever was necessary to abate bvious nuisance. The character of the industries will never t of absolute freedom from offense, but the knowledge that a ant watch is being maintained will do much to enforce proper tion, and will doubtless prevent any gross carelessness in ods.

Respectfully submitted,

ARTHUR HOLLICK,

Inspector.

SANITARY CONDITION OF THE STATE

AND

SUMMARY OF MORTALITY REPORTED DURING THE YEAR.

SANITARY CONDITION OF THE STATE

AND

ummary of Mortality Reported During the Year.

By F. C. CURTIS, M. D.

During the twelve months ending with November, 1895, there ave been reported 125,500 deaths, of which 4,200 were reported fter the issue of the monthly bulletin. This makes a death rate r the year of 19.31 per 1,000 population, estimating the popula- on at 6,500,000. Taking the estimated increase in the population r the year at a total of 6,750,000, the death rate is about 18.60.

As to the completeness of these returns, the State Board of ealth is dependent for the receipt of them upon about 1,400 local oards of health, which undoubtedly execute the laws requiring ie report of all deaths that occur in their respective territories ith varying exactness. Of these boards, there were none which ailed to make any report of deaths except the following: Those f the towns of Clare, St. Lawrence county; population, 332; lope, Hamilton county, population, 534; Independence, Allegany ounty, population, 1,203; Otselic, Chenango county, population, ,243; Willett, Cortland county, population, 768, the combined opulation being 3,080. Besides these the following towns have eported but one death during the year, and that a delayed return received after the monthly bulletin was issued): Duane, Franklin ounty, population, 321; North Hudson, Essex county, population, 50; Ossian, Livingston county, population, 925; Stratford, Ful- on county, population, 956.

From a population of about 6,000, but four deaths have been reported. All of these towns have organized boards of health, and all with more or less regularity have reported births and mar- riages, except Willett, from which town no returns of any sort

have been received. It is not impossible that in these sparsely inhabited towns no deaths beyond the number noted have occurred.

What is more to the purpose, so far as completeness of returns is concerned, is the question whether the other local boards of health of the State have reported fully; and undoubtedly many have not done so. The central office of the State Board has been making constant effort to keep the local boards up to a state of activity and perfection in this regard, and to induce them to execute with fidelity the laws which are, if enforced, sufficiently exacting to make it possible to secure a return of every death in the State. The State Board of Health could effect a greater fidelity to their duties by keeping in closer touch with the local boards through the personal and frequent visitation of an inspector from this Board.

The State Board of Health of Massachusetts, whose records of vital statistics extend back to 1841, has issued a standard table based upon the records for each year, revised to 1894. This table shows that from 1849, from which year it is believed that the omissions constitute but a small percentage of the total registration, there was a death rate per 1,000 living year by year of from 16.70 in 1850, the lowest, to one of 22.85 in 1872, the highest, and an average death rate for the forty-six years of 19.98.

The death rate of a locality will vary widely according to its existing conditions affecting health — in cities with conditions inimical to vitality in early life and with the more effective operation of diseases spread by contagion incident to more closely aggregated populations, the average longevity will be less than in the sparsely settled towns; and the growing city with its constant influx of vigorous young life will show a smaller death rate than one which only adds to its population from its own natural increase by excess of births over deaths (and the Massachusetts table already quoted from shows that for the same period of forty-six years this excess amounted, on the average to 7.25 per 1,000 population). But it is manifestly true that for a long period of years no locality is likely to maintain a death rate lower than that found to have existed in the Massachusetts table or a greater average longevity for the entire community than is implied by it; that

of the entire period implying an average longevity of 50 years, and the lowest of the series one of 60 years

The implied longevity of the death rate for the year in this State as noted was between 52 and 54½ years.

The following shows the comparative reported mortality for the past eight years:

In 1888, there was one death in every 57.68 of the population.
In 1889, there was one death in every 58.88 of the population.
In 1890, there was one death in every 52.75 of the population.
In 1891, there was one death in every 52.10 of the population.
In 1892, there was one death in every 50.78 of the population.
In 1893, there was one death in every 52.67 of the population.
In 1894, there was one death in every 53.60 of the population.
In 1895, there was one death in every 54.80 of the population.

The following shows the classified causes of death for the year, and with them the number due to the same causes for seven years preceding:

Totals of mortality, classified by causes, for 1895 and seven years preceding.

YEARS.	Total number of deaths.	Representing average daily death rate of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
1888	103,969	300	38,347	36.3	216.00	499	1,449	842	211	2,378	850	844	902
1889	104,119	300	38,427	36.8	210.34	392	1,571	742	43	2,312	1,004	304	1,332
1890	118,552	325	37,063	31.2	164.80	482	1,572	732	4	832	1,077	298	1,169
1891	122,398	335	42,352	34.5	178.32	687	1,900	631	4	2,173	1,239	370	835
1892	128,015	350	42,703	33.4	181.24	657	1,700	620	126	2,228	1,346	488	880
1893	122,841	336	41,544	33.8	181.85	853	1,674	506	234	1,715	801	363	1,213
1894	119,780	328	41,639	34.7	193.00	572	1,659	414	330	1,321	935	322	1,040
1895	121,297	332	41,476	34.2	178.10	539	1,687	310	21	857	1,129	372	1,150

Totals of mortality, classified by causes, etc.— (Concluded).

YEARS.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence	Old age.	Unclassified.
1888	6,710	8,765	13,569	12,388	1,049	6,153	4,873	6,353	11,055	2,473	3,792	8,178	11,129
1889	5,930	8,271	13,590	12,280	991	6,472	5,727	6,814	11,233	2,632	3,901	6,102	12,386
1890	4,954	8,498	17,938	13,917	926	7,624	5,671	7,320	11,902	2,851	4,545	5,485	18,747
1891	4,844	9,143	19,722	13,500	1,038	8,073	6,363	9,322	12,983	2,989	4,797	6,252	15,247
1892	5,970	9,187	21,426	13,416	1,153	8,991	6,523	9,035	14,060	3,189	5,555	6,701	14,764
1893	5,942	9,046	19,099	13,169	1,052	8,828	6,917	9,032	13,880	3,237	5,337	5,518	14,422
1894	6,616	9,976	16,774	12,804	936	8,774	6,928	8,523	12,990	3,290	5,462	5,818	15,459
1895	5,096	9,043	17,534	13,330	918	8,817	7,468	9,744	11,841	3,517	5,741	5,567	16,385

For the purpose of comparison the deaths as reported in the bulletins for this period, as well as for this year are used.

The average daily mortality for the past eight years has been 326, varying from 300 to 350. The average of this year is 8 more than the average for the entire period.

The average proportion of deaths under 5 years for the past 8 years has been 34.4 per cent. of all the deaths, varying from 31.2 per cent. in 1890, to 36.8 per cent. in 1889. This year 34.2 per cent. of the deaths occurred in early life.

The average proportion of deaths from common zymotic diseases for the past 8 years has been 18.78 per cent. of all the deaths, varying from 16.48 per cent. in 1890 to 21.60 in 1888. This year the proportion has been 17.81 per cent. of all the deaths.

The average proportion of deaths from consumption for the past 8 years has been 11.13 per cent. of all deaths; this year the proportion was 11 per cent. of all deaths. The average number of deaths from this cause per year for the period is 13,100, this year 13,330 having occurred. The number of deaths attributed to this cause has varied little, having been chiefly increased in those when grippe was most severe, in 1890 and 1891.

The year will appear to have been, compared with preceding years, one of salubrity above the average.

There are eight Sanitary Districts into which the State has been divided for convenience and instruction, which, following county lines are as follows:

I. The Maritime District, which includes New York, Long Island, Staten Island and Westchester county, made up of the metropolis and its suburbs, and all of the State in proximity to the ocean.

II. The Hudson Valley District, which includes all of the counties on either side of the Hudson river except Westchester, to and including Albany and Rensselaer, and contains numerous cities of medium size, is much of it on the highways of travel from either direction, and has a fairly well populated farming country.

III. The Adirondack and Northern District, which includes he northern section of the State, the counties of Washington, Warren, Hamilton, Essex, Clinton, Franklin, St. Lawrence, Jefferson and Lewis; it takes in the whole St. Lawrence river border, he Adirondack wilderness, the highest elevations in the State, nd the source of the chief streams.

IV. The Mohawk Valley District, which includes the counties f Saratoga, Schenectady, Schoharie, Montgomery, Fulton, Herimer and Oneida, a populous manufacturing and rich agricultural district, along the line of the Mohawk river and traversed y the main trunk railroad lines.

V. The Southern Tier District, which contains the counties long the southern border of the State, of Broome, Tioga, Chemung, Steuben, Allegany, Cattaraugus and Chautauqua, through which the Erie railroad runs, along which are numerous large owns, but which has large areas of elevated and sparsely settled country.

VI. The East Central District, including the counties of Sullivan, Delaware, Otsego, Madison, Chenango, Onondaga and Cortland, is composed almost entirely of an agricultural population, with the large city of Syracuse, and in its southern portion much levated and sparsely settled, and even wilderness, region.

VII. The West Central District, including Cayuga, Tompkins, Seneca, Schuyler, Ontario, Yates, Livingston, Genesee and Wyoming counties, having numerous good-sized villages, but no place above 25,000 population, and made up, to a large degree, of an agricultural population, containing most of the mid-State lakes.

VIII. The Lake Ontario and Western District, or as it might be called, The Great Lake District, including Oswego, Wayne, Monroe, Orleans, Niagara and Erie counties, which lie along the great lakes, and contain the large cities of Buffalo and Rochester, and, next to the maritime, having the largest population of urban population than either of the other districts.

The following table shows the area respectively of these sanitary districts, and the comparative density of their populations:

Relative area and density of population of the sanitary districts.

SANITARY DISTRICTS.	Area in square miles	Entire population estimated.	Population per square mile.	Percentage of city population.
Maritime	2,286	3,500,000	1,476	89.50
Hudson Valley	5,872	685,000	117	40.50
Adirondack and Northern	15,080	387,000	26	7.50
Mohawk Valley	4,731	376,100	80	30.93
Southern Tier	6,545	406,000	62	28.75
East Central	6,555	386,600	59	24.75
West Central	4,746	311,000	65	12.50
Lake Ontario and Western	4,378	794,300	181	64.50
Entire State	50,200	6,840,000	136	63.50

COMPARATIVE MORTALITY IN THE SANITARY DISTRICTS.

The following shows the reported mortality in the Sanitary Districts for the year, as given in the Monthly Bulletins:

It is difficult to find an absolute means of showing the relative mortality in the Sanitary Districts from the various causes and this table is simply a report of what has been received. It may be said that imperfection in returns from delay or neglect is greatest in those districts having the largest rural population; that of the Maritime District is nearly complete. The populations given are estimated to date.

Totals of mortality from various causes in the sanitary districts.

DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under 5 years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
Maritime	3,500,000	73,863	21.10	30,110	40.7	184.75	336	552	278	21	627	943	238	834
Hudson Valley	685,000	11,966	17.47	3,114	27.2	159.00	56	377	51	...	94	47	36	110
Adirondack and Northern	387,000	4,288	11.20	900	21.0	116.64	17	110	3	...	29	3	11	20
Mohawk Valley	376,000	5,372	14.28	1,141	21.2	110.90	24	107	9	...	24	...	16	35
Southern Tier	406,000	4,810	12.00	954	20.0	122.50	17	122	13	...	10	6	18	39
East Central	386,000	5,436	14.30	1,090	20.0	110.00	27	106	17	...	27	3	15	23
West Central	311,000	4,023	13.00	568	14.0	94.20	13	79	14	...	7	5	13	17
Lake Ontario and Western	790,000	11,539	15.35	3,599	31.2	181.00	49	234	25	...	39	122	25	72

Totals of mortality from various causes in the sanitary districts — (Concluded).

DISTRICTS.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
Maritime	3,847	5,972	11,505	8,345	529	5,456	4,793	5,255	5,708	1,790	3,714	1,381	11,739
Hudson Valley	348	789	1,644	1,290	86	771	703	1,005	1,643	351	469	786	1,263
Adirondack and Northern	81	227	469	486	54	325	190	443	541	168	176	483	446
Mohawk Valley	80	301	621	617	45	386	360	518	663	207	227	525	557
Southern Tier	121	243	610	428	34	370	275	475	576	177	247	567	462
East Central	86	291	665	535	33	412	311	588	686	254	253	547	557
West Central	49	181	449	414	30	343	255	460	538	161	153	493	341
Lake Ontario and Western	484	1,039	1,571	1,215	107	754	581	1,000	1,486	409	502	785	1,020

For arriving at data regarding the distribution of diseases, the most absolute basis of comparison is furnished by the comparative mortality to population. Basing an estimate in this direction on the returns as given in the preceding table the following shows the number of deaths from the various causes as classified in the Bulletin which occurred in 100,000 population in each of the Sanitary Districts.

Showing the number of deaths in each 100,000 *population from various causes in the sanitary districts.*

DISTRICTS.	Cerebro spinal meningitis.	Typhoid fever.	Malarial disease.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.
Maritime	9.6	15.7	8.0	17.7	27.0	6.8	23.8	110.0	170.5	328.5
Hudson Valley	8.0	54.0	7.5	13.7	7.0	5.3	15.8	50.0	113.0	235.0
Adirondack and Northern	4.5	29.5	0.8	7.8	0.8	3.0	5.3	21.0	60.0	125.0
Mohawk Valley	6.5	29.0	2.5	6.5	.....	4.5	9.5	22.0	81.5	200.0
Southern Tier	4.0	30.0	3.2	2.5	15.0	4.5	9.7	30.2	60.7	152.5
East Central	7.1	28.0	4.0	7.0	7.5	4.0	6.0	27.0	73.0	168.0
West Central	4.0	26.0	4.6	2.2	1.6	4.0	5.6	16.2	60.0	149.0
Lake Ontario and Western	6.8	31.0	3.5	5.2	16.0	3.5	9.5	65.0	132.0	200.0

Showing the number of deaths in each 100,000 *population from various causes in the sanitary districts*—(Concluded).

DISTRICTS.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal.)	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.
Maritime	238.3	15.0	156.0	137.0	150.0	163.0	51.1	106.0	39.5
Hudson Valley	185.0	12.3	112.0	100.0	146.0	235.0	50.1	67.5	112.5
Adirondack and Northern	138.0	14.3	85 5	50.0	120.0	142.5	44.5	46.5	125.0
Mohawk Valley	100.0	12.5	105.0	91.0	140.0	180.0	56.0	61.5	135.5
Southern Tier	107.0	8.5	92.5	68.7	118.7	144.0	44.2	61.2	144.0
East Central	134.0	8.5	103.5	80.0	150.0	172.0	66.0	66.0	135.0
West Central	135.0	10.0	114.0	84.0	150.0	178.5	54.0	50.0	163.0
Lake Ontario and Western	160.0	14.2	80.0	77.5	140.0	190.0	54.5	66.5	100.0

The distribution of certain important diseases is shown by the following table, in which their mortality, compared with the total reported mortality, is shown. The mortality as reported in the Bulletins is again taken for comparison.

Area, density of population, and relative death-rates in the sanitary districts for 1895.

DISTRICTS.	Area in square miles.	Population per square mile.	Percentage city population.	Death-rate per 1,000 population (annual.)	Percentage deaths under 5 years of age.	In Each 1,000 Deaths from all Causes there were from						
						All zymotic diseases.	Typhoid fever.	Scarlet fever.	Diphtheria and croup.	Diarrhœal diseases.	Consumption.	Acute respiratory diseases.
Maritime	2,286	1,535	90.0	21.10	40.7	184.75	7.50	8.68	52.12	80.85	113.10	156.00
Hudson Valley	5,872	117	40.5	17.47	27.2	159.00	31.40	7.83	29.00	65.75	107.50	137.00
Adirondack and Northern	15,080	26	7.5	11.20	21.0	116.64	25.60	6.75	18.80	52 90	113.25	109.30
Mohawk Valley	4,731	80	31.0	12.00	21.2	110.90	20.00	4.50	15.00	56.00	114.80	115.00
Southern Tier	6,545	62	30.0	14.30	20.0	122.50	25.42	2.80	25.25	50.45	89.15	127.25
East Central	6,555	59	25.0	13.00	20.0	110.00	19.50	5.00	15.80	53.45	98.35	122.25
West Central	4,746	65	13.0	15.35	14.0	94.20	19.75	1.75	12.25	45.25	101.00	112.25
Lake Ontario and Western	4,378	180	65.0	15.35	31.2	181.00	20.00	3.35	42.75	90.00	105.25	136.00
Entire State	50,200	136	63.5	18.35	30.4	166.56	13.80	7.06	42.00	74.55	109.65	144.50

EFFECT OF SEASON ON MORTALITY.

The distribution of mortality as regards season is shown by the following table, which covers a period of 10 years including 1895. The average mortality from each cause for the period is taken for each month and the annual death rate per 100,000 population computed from that; the average population for the entire period is taken at 6,000.000. It will be noted that the ratio is that of an annual mortality in each case and not of the actual mortality for the month; that is, the entire number of deaths for the 10 years from typhoid fever, for instance, in January is found, one-tenth of that taken as the average for one year and from this the annual rate found and then the rate per 100,000 population, or in other words, the annual rate.

Annual death rate per 100,000 *population, computed from the average number of deaths per annum for* 10 *years* (1886–95), *from the following causes:*

	Total number of deaths per 100,000 population.	Deaths under five years per 100,000 population.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.
January	1999.00	570.40	8.60	20.00	8.50	2.30	36.00	21.50	8.00	18.00	119.00
February	1958.00	544.40	9.10	19.20	7.60	3.00	38.60	20.60	9.75	16.00	99.20
March	1900.00	579.75	11.40	18.30	8.65	2.95	34.82	21.23	9.00	19.45	102.66
April	1975.00	603.60	13.40	16.40	10.00	3.00	39.00	24.60	10.00	18.60	91.20
May	1783.00	549.50	12.80	13.75	10.00	3.00	34.42	26.75	8.26	15.73	92.45
June	1713.00	626.80	9.25	12.80	10.40	1.20	26.75	25.40	5.40	14.82	80.56
July	2257.00	1151.80	10.46	19.27	10.00	1.18	16.13	17.30	3.15	21.24	70.40
August	1976.50	835.85	8.30	33.43	13.77	1.00	12.20	9.05	2.75	24.60	60.38
September	1800.00	728.00	7.80	48.60	16.40	1.20	12.00	5.20	2.80	18.80	72.00
October	1680.00	545.50	6.90	47.20	15.54	1.37	14.75	5.90	2.56	14.00	106.20
November	1576.00	457.20	6.40	37.80	11.60	1.40	20.20	12.40	4.00	10.80	123.60
December	1721.80	509.37	6.90	26.75	10.42	1.96	29.50	18.70	6.10	13.37	128.42

Annual death rate per 100,000 *population, computed from the average for* 10 *years, etc.*—(Concluded).

	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
January	19.10	449.00	240.00	19.20	103.00	102.20	149.50	203.00	46.00	62.00	133.00	230.00
February	20.60	382.85	279.60	20.60	106.17	105.80	140.20	207.35	44.42	59.00	130.65	224.00
March	32.45	396.30	231.67	22.60	107.38	104.40	141.00	213.40	49.16	60.00	133.90	235.01
April	24.00	412.20	240.00	19.80	110.40	106.00	140.60	217.00	44.65	69.30	122.20	241.00
May	26.55	293.00	224.20	17.70	105.20	103.25	133.75	196.65	48.20	82.60	104.65	228.50
June	153.80	175.00	192.60	15.80	122.80	91.60	118.60	200.00	47.40	95.80	82.00	223.60
July	615.37	127.64	202.70	15.26	194.10	96.00	116.00	219.60	49.17	104.23	88.10	264.90
August	427.00	119.00	199.32	13.77	162.45	90.47	110.53	200.60	49.95	94.40	92.63	252.32
September	263.00	136.00	194.80	12.00	151.40	96.80	110.60	180.40	48.40	80.00	95.40	236.80
October	96.00	185.46	203.55	12.00	128.00	95.58	119.38	158.00	49.56	75.72	97.16	228.53
November	27.20	243.20	194.20	12.60	99.80	94.00	121.00	163.80	43.20	72.20	90060	187.00
December	19.60	331.78	208.07	15.34	95.00	96.00	125.87	192.42	46.61	63.33	107.38	181.72

The foregoing shows more perfectly than the record of a single year the relative prevalence of diseases. Consumption is seen to be more fatal in the winter months, to cause the fewest deaths in June, and next to that in November, which is pretty uniformly true of each separate year. Typhoid fever begins to increase in fatality in August, and to be highest in September and October. There was an annual death-rate of 449 per 100,000 population from acute respiratory diseases in January (largely magnified, by the way, from the extraordinary Grippe epidemics which have, during several of these years, reached their height in that month), and in August only 119, or one-fourth as many. July has a death-rate from diarrhoeal diseases of 615 per 100,000 living, while in January it falls to 19. Diphtheria causes most deaths in December and fewest in August. November is the month in which the nearest approach is made to a general abeyance of the varyingly prevalent causes of death and next to that of June. July, with its great mortality from diarrhoeal diseases, is the month of greatest fatality, and especially in early life, between two and three times as many dying under 5 years of age during that month than in November.

The following tables show, respectively, the average mortality for ten years, including 1895, for the four seasons, from December to December, and, following it, the mortality for the seasons of the current year:

Mortality for the four seasons. Average of ten years, 1886–95.

	Total number of deaths.	Representing annual death-rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
Three winter months	27,537	18.93	6,164	33.0	138.42	121	324	131	35	508	299	116	238
Three spring months	28,918	18.90	8,760	30.0	132.38	191	245	144	46	564	367	138	280
Three summer months	30,000	19.81	13,511	44.0	282.65	144	332	173	17	278	261	57	304
Three autumn months	25,379	16.89	8,760	34.0	198.70	106	667	219	20	236	118	47	219

Mortality for the four seasons, etc.—(Concluded).

	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
Three winter months....	1,745	291	5,694	3,318	270	1,489	1,491	1,993	2,925	674	904	1,815	3,118
Three spring months....	1,443	420	5,566	3,518	304	1,633	1,597	2,100	3,172	735	1,079	1,826	3,562
Three summer months...	1,068	1,369	2,129	2,996	221	2,427	1,406	1,745	3,145	741	1,489	1,329	3,748
Three autumn months...	1,518	1,939	2,842	2,980	184	1,906	1,440	1,765	2,607	710	1,146	1,424	3,281

Mortality for the four seasons in 1895.

	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
Three winter months.....	30,751	19.00	8,748	28.4	106.27	124	346	74	19	283	113	110	218
Three spring months	31,376	19.30	9,734	31.1	109.90	177	306	93	1	332	415	149	267
Three summer months	31,467	19.40	13,917	43.5	261.40	135	345	100	.....	129	423	65	394
Three autumn months	27,703	17.10	9,399	33.1	183.87	112	689	143	2	113	178	46	271

Mortality for the four seasons in 1895—(Concluded).

	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
Three winter months..	1,610	318	6,659	3,522	232	1,768	1,930	2,552	3,105	840	1,138	1,505	4,295
Three spring months ..	1,259	445	5,989	3,643	270	1,985	2,043	2,791	3,299	864	1,353	1,721	4,174
Three summer months.	966	5,904	2,120	3,065	213	2,827	1,714	2,191	2,961	1,154	1,766	1,178	4,017
Three autumn months.	1,263	2,376	2,772	3,100	203	2,267	1,791	2,220	2,626	859	1,506	1,267	3,899

ıe winter months there was a daily average mortality of
ı the spring, 341; in the summer, 342; and in the autumn,
n 1894 these respective seasons had daily averages of 344,
5 and 293.

ıe winter months there was a death rate per 1,000 popula-
19; in the spring of 19.3; in the summer of 19.4, and in the
n of 17.1.

summer months show a zymotic mortality of 26.14 per cent.
total; the autumn months of 18.38 per cent.; the spring of
cent.; the winter of 10.63 per cent.

infant mortality in the summer months was 43.5 per cent.
total; in the autumn, 33.1 per cent.; the spring, 31.1 per
nd the winter, 28.4.

rhoeal diseases and diseases of the digestive system show
r fatality in the summer and autumn; those of the respi-
and nervous systems are the principal seat of disease in the
and spring months.

ɜumption also causes more deaths in the winter and spring
s. The same also is true of diseases of the urinary system.
ıese respects the year corresponds with the average of the
ırs.

details of mortality, month by month, for the past eight
from December, 1887, to December, 1895, are given in the
that follow. By reference to this the consecutive mortality
ɛrly succession can be traced. Periods of exacerbation of
ɛ, such as measles, for example, which is subject to them,
located and traced month by month.

MORTALITY OF THE STA

TOTALS OF MORTALITY OF

MONTHS.	Total number of deaths.	Representing average daily death-rate of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Small pox.	Scarlet fever.
1887.										
December ...	7,888	254	2,497	31.6	190.00	37	104	78	12	204
1888.										
January	8,742	282	2,848	32.5	176.75	37	64	71	21	265
February ...	8,637	298	2,748	32.0	154.00	44	84	49	10	239
March	9,550	308	2,849	30.0	147.37	55	81	58	35	239
April	8,129	271	2,468	30.0	150.00	75	45	52	40	250
May	9,032	291	2,891	32.1	141.75	62	59	68	42	277
June	8,368	279	3,306	39.7	227.34	40	45	56	11	233
July	10,300	332	5,363	52.0	380.60	35	73	51	2	141
August	10,017	323	4,867	48.7	345.82	29	174	87	6	120
September ..	8,433	281	3,877	45.9	294.32	31	279	102	12	114
October	7,886	254	2,522	32.0	196.37	33	288	109	12	125
November ..	6,987	233	2,111	30.2	174.88	21	153	61	8	171
Totals ...	103,969	285	38,347	36.5	216.00	499	1,449	842	211	2,378

TOTALS OF MORTALITY OF

1888.										
December ...	8,369	269	2,495	29.8	179.00	28	138	49	13	278
1889.										
January	8,437	270	2,983	35.2	170.32	35	89	51	15	242
February ...	8,183	292	2,933	35.8	170.00	32	71	30	9	324
March	9,547	308	3,381	35.4	167.50	43	69	47	1	386
April	9,078	303	3,116	34.5	174.20	45	78	64	2	363
May	8,357	270	2,773	33.2	155.91	42	63	37	....	276
June	8,370	279	3,632	43.4	241.82	27	45	59	....	54
July	10,806	349	5,563	51.4	352.20	46	117	61	1	69
August	9,373	302	4,059	40.7	280.75	33	224	96	....	54
September ..	8,264	275	3,179	38.4	234.26	19	247	98	2	53
October	8,050	260	2,288	28.4	177.00	21	261	87	....	57
November ..	7,285	243	2,025	27.7	139.60	21	169	63	....	56
Totals ...	104,119	285	38,427	36.8	210.34	392	1,571	742	43	2,312

TOTALS OF MORTALITY OF

1889.										
December ...	8,483	274	2,311	27.4	126.35	38	117	53	....	73
1890.										
January	13,020	420	2,227	18.2	89.70	29	117	62	....	93
February ...	9,130	326	2,370	27.5	118.00	37	94	39	....	96
March	9,844	318	2,772	30.0	117.35	47	72	36	2	90
April	9,488	316	2,826	31.8	121.42	51	73	43	1	78
May	9,104	297	2,740	31.6	130.95	62	72	65	....	69
June	9,185	306	3,515	40.2	217.70	28	69	63	1	68
July	11,606	374	5,602	50.5	327.37	56	101	56	....	45
August	10,642	343	4,480	48.8	292.70	49	167	86	....	35
September ..	9,111	304	3,356	39.0	224.45	30	234	34	....	40
October	8,640	279	2,665	32.7	155.00	26	240	87	....	62
November ..	8,209	274	2,199	28.5	146.00	29	216	68	....	102
Totals ..	118,552	325	37,063	31.2	164.80	482	1,572	732	4	832

)R SEVEN YEARS, BY MONTHS.

ATE BY MONTHS FOR 1888.

Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
21	883	78	1,205	1,022	75	441	408	543	798	208	295	761	636
40	879	78	1,563	1,089	105	481	412	553	916	203	278	882	715
49	647	85	1,644	1,112	105	437	434	563	878	193	233	1,042	674
48	682	109	1,762	1,238	138	450	423	608	991	204	292	1,096	935
48	448	113	1,332	1,117	90	407	404	549	966	168	265	738	890
49	627	131	1,438	1,195	98	458	481	570	1,009	211	370	738	988
61	490	811	778	868	94	516	393	491	1,075	237	411	472	1,130
108	411	2,957	588	966	78	784	383	492	930	210	397	454	1,111
144	345	2,465	528	959	74	647	402	473	1,010	227	370	530	1,347
142	308	1,440	649	895	69	600	343	494	895	198	303	510	995
102	432	386	1,031	1,034	70	518	392	495	791	232	278	512	984
90	538	112	1,051	893	58	414	398	522	796	164	300	443	726
902	6,710	3,765	13,569	12,388	1,049	6,153	4,873	6,353	11,055	2,473	3,792	8,178	11,129

ATE BY MONTHS FOR 1889.

113	621	87	1,392	1,017	95	434	461	584	917	232	345	577	817
105	606	101	1,473	1,061	77	421	469	577	946	194	279	507	896
119	563	75	1,447	947	100	401	461	574	922	183	256	507	896
157	590	115	1,840	1,195	109	468	488	662	1,004	228	237	624	1,092
137	589	122	1,656	1,092	125	429	478	574	986	222	311	590	1,029
121	492	123	1,172	1,102	86	511	421	599	951	227	377	548	1,061
120	423	1,112	744	919	77	639	386	485	951	222	376	414	1,133
112	305	3,092	537	1,012	63	844	449	542	1,029	227	357	502	1,394
133	327	1,901	591	1,026	63	680	437	540	936	254	373	477	1,196
90	343	1,094	646	949	65	638	794	483	870	206	326	446	872
70	579	339	959	1,016	64	557	531	595	899	238	343	491	1,032
55	501	110	1,133	944	67	450	452	599	822	199	311	419	868
1,332	5,930	8,271	13,590	12,280	991	6,472	5,727	6,814	11,233	2,632	3,901	6,102	12,386

ATE BY MONTHS FOR 1890.

84	546	110	1,631	1,131	83	461	466	657	949	240	288	455	1,046
114	534	98	3,847	1,801	95	542	553	724	1,107	277	333	653	1,969
92	518	82	1,950	1,304	74	477	415	556	927	209	264	515	1,399
110	514	94	1,929	1,233	99	511	471	709	1,051	235	314	520	1,663
77	436	97	1,781	1,188	75	599	484	691	1,046	220	330	460	1,578
68	420	142	1,538	1,077	96	539	508	691	999	273	371	436	1,554
90	364	1,087	972	984	83	679	497	541	1,000	237	452	347	1,433
123	293	2,916	706	1,073	60	1,024	497	543	1,092	242	553	395	1,718
153	233	2,192	666	1,064	70	871	442	537	1,125	236	512	375	1,749
102	247	1,196	710	1,027	47	768	418	520	871	136	375	450	1,712
84	382	360	1,001	1,061	71	635	485	597	884	238	366	470	1,538
62	467	124	1,207	1,019	74	518	435	554	851	208	387	409	1,288
1,169	4,954	8,498	17,938	13,817	926	7,624	5,671	7,320	11,902	2,851	4,545	5,435	18,747

MORTALITY OF THE

TOTALS OF MORTALITY OF THE

MONTHS.	Total number of deaths.	Representing average daily death-rate of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.
1890.											
December ...	8,761	283	2,635	30.0	136.00	30	157	59	....	144	117
1891.											
January	9,549	308	2,868	30.0	132.50	47	138	44	1	182	140
February ...	8,704	311	2,813	32.5	141.75	41	127	32	....	203	127
March	10,672	344	3,118	29.2	115.30	63	121	42	....	195	157
April	13,981	466	3,809	27.3	92.85	67	103	48	1	273	159
May	10,213	329	2,917	28.6	117.45	57	88	35	....	252	134
June	9,321	311	3,715	38.8	186.80	42	80	46	....	207	133
July	11,370	367	5,782	50.8	229.72	57	97	44	....	181	93
August	10,720	346	4,829	35.0	297.12	38	171	67	....	120	41
September ..	9,662	322	3,984	41.2	247.04	59	287	83	....	99	21
October	6,718	217	3,454	35.5	200.00	47	290	70	....	118	38
November ..	8,727	291	2,528	29.0	151.06	39	241	61	2	179	21
Totals ...	122,398	335	42,352	34.5	178.32	687	1,900	631	4	2,173	1,229

TOTALS OF MORTALITY OF THE

1891.											
December ...	11,241	363	3,023	26.9	133.45	32	183	47	....	246	73
1892.											
January	13,460	434	3,246	24.1	107.00	58	116	38	2	294	80
February ...	10,755	371	3,139	29.2	123.44	53	98	33	7	290	89
March	10,978	357	2,342	21.3	124.69	77	96	37	3	285	114
April	10,590	353	3,245	30.7	128.29	76	77	40	11	248	161
May	10,223	330	3,289	32.3	139.43	69	71	50	13	245	254
June	9,075	302	3,437	37.7	188.50	57	75	62	10	183	255
July	13,555	438	6,855	52.1	340.00	59	131	61	8	75	150
August	10,903	352	4,933	45.2	292.00	54	182	56	18	61	51
September ..	9,695	320	3,760	38.8	235.90	48	282	74	9	78	37
October	9,092	293	2,894	31.8	174.72	34	205	72	27	96	26
November ..	9,448	281	2,540	30.1	167.19	39	184	50	18	127	51
Totals ...	128,015	350	42,703	33.4	181.24	657	1,700	620	126	2,228	1,346

TOTALS OF MORTALITY OF THE

1892.											
December ...	9,528	308	2,754	28.9	146.41	24	147	40	17	195	82
1893.											
January	10,490	338	3,056	29.1	137.00	44	120	34	15	237	86
February ...	9,358	334	2,774	29.6	136.28	46	101	29	23	198	80
March	12,000	387	3,419	28.5	121.17	89	115	37	29	221	76
April	11,865	395	3,339	28.1	111.16	104	111	34	23	199	72
May	10,718	346	3,081	28.7	128.94	159	93	40	21	193	92
June	8,728	291	2,885	33.0	162.88	96	83	42	10	154	99
July	12,337	398	6,246	50.5	324.25	86	87	45	16	79	75
August	11,037	356	4,954	45.0	298.46	55	157	62	11	63	44
September ..	9,346	311	3,718	39.8	248.65	49	227	63	23	34	24
October	8,981	290	2,994	33.4	185.00	56	253	50	19	65	14
November ..	8,458	281	2,324	27.5	157.00	45	180	30	27	77	56
Totals ...	122,841	336	41,544	33.8	181.85	853	1,674	506	234	1,715	801

ATE—(*Continued*).

TE BY MONTHS FOR 1891.

Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
71	497	80	1,756	1,045	85	533	483	643	1,000	257	285	454	1,029
92	489	103	1,761	1,210	81	533	548	737	1,041	220	288	523	1,251
81	419	121	1,683	985	107	517	522	672	1,003	205	290	504	1,007
104	413	101	2,307	1,318	112	613	611	771	1,165	232	290	696	1,270
106	370	122	4,457	1,377	92	596	645	869	1,348	271	418	901	1,816
79	339	127	2,129	1,234	114	561	555	741	1,021	248	434	629	1,349
65	319	808	1,098	978	103	720	479	678	1,127	224	534	353	1,286
48	304	2,906	717	1,032	67	1,036	502	652	1,158	239	458	363	1,397
34	266	2,405	675	1,041	87	925	480	612	1,133	257	617	477	1,235
60	334	1,434	720	1,039	65	924	479	596	997	289	449	421	1,293
54	527	794	1,012	1,124	60	832	558	695	1,023	259	430	494	1,281
31	567	143	1,567	1,017	65	583	501	656	967	237	404	437	1,033
835	4,844	9,143	19,722	13,560	1,038	8,073	6,363	9,322	12,983	2,989	4,797	6,252	15,247

ATE BY MONTHS FOR 1892.

41	725	115	2,731	1,090	100	646	593	801	1,183	296	416	732	1,153
48	659	94	3,801	1,286	125	686	541	953	1,339	295	362	1,183	1,449
41	538	99	2,315	1,196	113	620	564	813	1,218	232	340	770	1,247
48	531	108	2,390	1,272	137	638	583	803	1,305	276	323	690	1,192
60	491	131	2,101	1,252	126	665	576	822	1,291	240	400	466	1,233
69	480	113	1,972	1,207	108	617	610	776	1,159	270	461	443	1,180
50	309	676	1,060	1,005	89	692	449	693	1,132	248	545	368	1,080
136	340	3,629	861	1,093	96	1,264	556	700	1,348	266	842	417	1,503
138	275	2,328	704	1,056	73	985	512	662	1,208	279	572	369	1,301
94	374	1,266	854	1,023	69	887	502	644	1,008	280	469	461	1,220
78	551	491	1,132	996	62	709	547	694	1,024	263	448	420	1,198
77	697	137	1,445	940	55	582	490	674	845	244	377	382	1,008
880	5,970	9,187	21,426	13,416	1,153	8,981	6,523	9,035	14,060	3,189	5,555	6,701	14,764

ATE BY MONTHS FOR 1893.

82	673	113	1,737	1,145	78	575	572	779	1,132	259	404	416	1,036
94	613	141	2,293	1,096	136	568	607	866	1,128	260	336	515	1,283
121	480	141	1,910	954	102	602	554	779	1,102	218	279	496	1,080
166	517	163	2,951	1,286	131	699	695	885	1,330	303	334	589	1,344
133	444	143	2,943	1,329	124	678	637	865	1,413	304	402	572	1,279
127	439	175	1,944	1,239	86	660	664	834	1,287	286	544	508	1,284
77	359	478	1,010	1,065	67	612	503	679	1,108	241	564	384	1,073
92	379	3,206	746	1,073	72	1,219	552	729	1,252	300	598	383	1,333
129	328	2,406	663	1,040	73	986	534	676	1,167	282	600	432	1,314
85	411	1,395	713	912	68	863	528	591	1,026	268	443	391	1,221
56	599	533	947	1,070	58	771	541	658	1,010	273	422	363	1,206
50	700	152	1,242	957	57	596	529	691	925	242	411	469	1,009
1,212	5,942	9,046	19,099	13,169	1,052	8,828	6,917	9,032	13,880	3,237	5,337	5,518	14,422

MORTALITY OF THE

TOTALS OF MORTALITY OF THE

MONTHS.	Total number of deaths.	Representing average daily death-rate of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.
1893.											
December ...	10,600	342	2,834	26.7	117.25	46	158	27	35	106	70
1894.											
January	10,948	353	3,088	28.2	124.10	53	105	30	34	146	122
February ...	9,417	336	2,943	31.2	125.00	42	86	14	52	129	135
March	10,196	329	3,215	31.5	137.80	52	131	26	47	174	164
April	9,946	320	3,147	31.5	135.00	55	91	33	59	184	148
May	9,286	300	2,862	30.8	139.50	53	85	29	37	140	97
June	9,805	327	3,588	36.6	182.65	32	72	43	24	121	90
July	12,516	404	6,260	50.0	335.20	50	93	44	19	76	55
August	10,390	335	4,664	44.8	233.00	44	133	41	6	48	19
September ..	9,525	317	3,948	41.5	244.00	28	229	51	9	33	15
October	9,008	290	2,936	32.5	180.00	22	234	46	5	32	15
November ..	8,146	271	2,254	27.6	51.85	25	189	30	10	52	15
Totals ...	119,780	328	41,639	34.7	193.00	502	1,659	414	330	1,321	935

TOTALS OF MORTALITY OF THE

1894.											
December ...	9,000	290	2,567	28.5	133.00	33	139	35	11	82	35
1895.											
January	10,980	354	3,132	28.6	100.40	51	108	30	3	103	34
February ...	10,771	384	3,049	28.3	85.40	40	99	9	5	98	44
March	11,379	367	3,340	29.4	98.00	53	99	23	....	131	99
April	10,545	351	3,506	33.3	115.70	78	115	32	....	118	133
May	9,452	308	2,888	30.5	116.00	46	92	38	1	83	183
June	8,736	293	3,114	35.6	175.25	40	81	35	....	71	217
July	11,681	377	5,841	50.0	326.21	49	108	26	....	22	120
August	11,050	357	4,962	45.0	282.75	46	156	39	....	26	76
September ..	10,011	337	4,161	41.5	250.00	52	220	50	....	26	38
October	9,320	300	2,951	31.5	167.00	36	265	50	2	36	46
November ..	8,372	280	2,287	27.4	134.62	24	204	43	....	51	96
Totals ...	121,297	332	39,798	34.1	165.36	548	1,686	410	21	857	1,129

The foregoing lists show the mortality, year by year, in the order

The following tables show the mortality of the months grouped lated together. It will show the comparative mortality of the

ATE — (*Concluded*).

ATE BY MONTHS FOR 1894.

Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
73	678	123	2,445	1,099	80	581	610	792	1,078	254	359	724	1,237
55	680	87	2,479	1,140	103	618	664	802	1,164	258	361	707	1,285
60	527	89	1,940	1,663	87	578	550	728	1,112	227	283	499	1,175
95	516	124	1,814	1,190	110	638	633	760	1,096	262	316	476	1,366
104	511	117	1,708	1,091	85	688	604	741	1,102	298	409	501	1,319
97	585	136	1,333	1,093	93	644	577	745	1,056	265	487	427	1,271
79	575	739	1,037	982	84	728	583	718	1,180	307	628	419	1,354
121	470	3,258	688	1,094	64	1,184	527	638	1,282	296	688	392	1,468
129	383	2,088	621	1,031	71	945	573	626	1,011	295	543	405	1,331
102	389	2,454	668	988	54	852	492	612	970	268	488	399	1,413
72	551	635	901	1,013	54	757	540	690	959	298	452	477	1,249
53	701	146	1,130	1,000	48	566	575	661	880	262	383	392	991
1,040	6,616	9,976	6,774	12,804	936	8,774	6,998	8,523	12,990	3,290	5,462	5,818	15,459

ATE BY MONTHS FOR 1895.

53	672	103	1,555	1,117	58	551	628	719	1,033	269	384	401	1,088
78	547	108	2,578	1,244	81	617	622	916	1,037	290	403	506	1,586
87	391	107	2,526	1,161	93	600	670	917	1,035	281	351	598	1,621
83	445	137	2,395	1,274	104	691	721	971	1,160	312	417	714	1,499
107	424	151	2,135	1,220	83	666	653	917	1,017	282	433	497	1,425
77	390	157	1,459	1,149	83	628	669	903	1,022	270	503	413	1,250
95	338	627	825	974	63	665	592	718	927	275	620	357	1,188
143	323	2,974	627	1,040	83	1,135	599	732	1,000	322	549	364	1,425
156	305	2,303	668	1,051	67	1,027	523	741	1,034	357	597	457	1,404
119	322	1,672	675	1,009	65	923	577	703	988	277	522	452	1,308
95	453	554	749	1,112	67	761	630	767	840	319	511	445	1,564
57	483	150	1,348	979	71	583	584	750	798	263	473	370	1,027
1,150	5,098	15,043	17,540	13,330	918	8,847	7,468	9,754	12,091	3,517	5,763	5,574	16,385

its occurrence.

ether, giving all the mortality of the respective months tabu-

nth in different years.

MONTHS.	Total number of deaths.	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
January:												
1886	6,717	2,252	33.3	161.11	28	66	53	3	138	20	34	192
1887	7,671	2,822	36.8	162.91	61	72	65	21	101	347	30	67
1888	8,742	2,848	32.5	176.75	37	64	71	21	265	55	35	49
1889	8,337	2,983	35.2	170.32	35	89	51	15	242	164	29	155
1890	13,020	2,427	18.2	89.70	29	117	62	....	93	42	39	114
1891	9,549	2,868	30.0	132.50	47	138	44	1	182	140	30	92
1892	13,460	3,246	24.1	107.00	58	116	38	2	294	80	51	46
1893	10,490	3,056	29.1	137.00	44	120	34	15	237	86	52	94
1894	10,948	3,088	28.2	124.10	53	205	30	34	146	122	35	55
1895	10,980	3,123	28.6	100.40	51	108	30	3	103	34	38	73
February:												
1886	6,288	2,011	32.0	153.60	42	57	66	7	119	7	44	105
1887	6,653	2,439	36.8	159.00	39	57	46	21	79	239	28	38
1888	8,037	2,748	32.0	154.00	44	84	49	10	239	55	39	49
1889	8,183	2,933	35.8	170.00	32	71	30	9	324	136	30	115
1890	9,130	2,370	27.5	118.80	37	94	39	....	96	50	32	92
1891	8,704	2,813	32.5	141.75	41	127	32	....	203	127	58	81
1892	10,755	3,139	29.2	123.44	53	98	33	7	290	89	79	41
1893	9,333	2,774	29.6	136.28	46	101	29	23	198	80	58	121
1894	9,417	2,943	31.2	125.00	42	86	24	52	139	125	41	60
1895	10,771	3,049	28.3	85.40	40	99	9	5	98	44	38	87
March:												
1886	7,918	2,552	32.2	138.67	63	75	78	6	119	21	46	129
1887	7,830	2,551	32.5	211.11	42	72	54	24	98	152	42	48
1888	9,405	2,788	30.0	147.37	49	74	56	35	239	56	48	48
1889	9,547	3,381	35.4	167.50	43	69	47	1	386	150	33	157
1890	9,844	2,772	30.0	117.35	47	72	36	2	90	94	47	110
1891	10,672	3,118	29.2	115.30	63	121	42	....	195	157	40	104
1892	10,978	2,312	21.3	124.64	77	96	37	3	285	114	70	48
1893	12,000	3,419	28.5	121.17	89	115	37	29	221	76	41	166
1894	10,196	3,215	31.5	137.80	52	13	26	47	179	164	46	95
1895	11,379	3,340	29.4	98.00	53	99	23	....	131	99	51	83
April:												
1886	7,181	2,281	31.8	142.00	63	69	75	8	129	32	49	123
1887	7,967	2,443	30.6	136.36	56	56	75	12	112	111	45	30
1888	8,129	2,468	30.0	150.00	75	45	52	40	250	77	34	48
1889	9,078	3,116	34.5	174.20	45	78	64	2	363	148	47	137
1890	9,488	2,826	31.8	121.42	51	73	43	1	78	187	43	71
1891	13,981	3,809	27.2	92.85	67	103	48	1	273	159	42	106
1892	10,500	3,215	30.7	128.29	76	77	40	11	248	161	63	60
1893	11,865	3,339	28.1	111.16	104	111	34	23	199	73	55	133
1894	9,945	3,147	31.5	135.00	55	94	33	54	184	148	19	104
1895	10,545	3,506	33.3	115.70	78	115	32	....	118	133	62	107
May:												
1886	6,659	2,044	31.7	147.45	55	45	75	5	116	37	43	89
1887	7,528	2,457	32.6	153.65	52	37	66	42	114	96	41	27
1888	9,032	2,891	32.1	141.75	62	59	68	42	277	109	50	49
1889	8,357	2,773	33.1	155.91	42	63	37	....	276	108	40	121
1890	9,194	2,740	31.6	130.95	62	72	55	....	60	200	34	68
1891	10,213	2,917	28.6	117.45	57	88	35	....	252	184	37	79
1892	10,223	3,289	32.3	139.43	69	71	50	13	245	254	56	69
1893	10,718	3,080	28.7	128.94	159	93	40	21	193	92	43	157
1894	9,286	2,862	30.8	139.50	53	85	29	37	140	97	36	97
1895	9,452	2,888	30.5	116.00	46	92	38	1	83	183	36	77

TEN YEARS.

Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
73	1,184	1,008	96	332	327	464	717	142	232	485	673
78	1,454	1,057	72	361	365	453	754	178	224	693	812
73	1,563	1,089	105	481	412	553	916	203	278	882	715
101	1,473	1,061	77	421	469	577	946	194	279	507	896
98	3,847	1,601	95	542	553	724	1,107	277	333	653	1,969
102	1,761	1,210	81	533	548	737	1,041	220	288	523	1,251
94	3,801	1,286	125	686	541	953	1,339	295	362	1,183	1,149
141	2,293	1,099	136	568	607	866	1,128	260	339	515	1,243
87	2,479	1,140	103	618	664	812	1,164	258	361	707	1,285
108	2,578	1,244	81	617	622	916	1,037	290	403	506	1,586
70	1,110	946	87	324	347	431	687	157	222	461	555
87	1,141	952	86	348	357	443	686	149	204	643	583
85	1,644	1,112	105	437	434	563	878	193	238	1,042	674
75	1,447	947	100	401	461	574	922	183	256	507	996
82	1,959	1,304	74	477	415	556	927	209	264	515	1,399
121	1,683	985	107	517	522	672	1,003	205	290	504	1,007
99	2,315	1,196	113	620	564	813	1,218	232	310	770	1,247
141	1,910	954	102	602	554	779	1,102	218	279	496	1,080
89	1,940	1,063	87	578	550	728	1,152	227	283	499	1,175
107	2,526	1,161	43	660	670	917	1,035	281	351	598	1,621
76	1,590	1,129	106	395	418	474	853	193	234	660	758
624	1,203	664	103	367	377	525	839	197	269	775	857
107	1,732	1,218	137	441	422	593	970	204	289	1,090	926
115	1,840	1,195	109	463	488	662	1,004	228	237	624	1,092
94	1,929	1,238	99	511	471	709	1,051	235	314	520	1,663
101	2,307	1,318	112	613	611	771	1,165	283	290	696	1,270
108	2,380	1,272	137	628	583	802	1,205	276	823	690	1,192
163	2,451	1,296	131	699	695	885	1,320	303	334	589	1,344
124	1,614	1,190	110	628	623	760	1,196	262	346	470	1,266
137	2,395	1,274	104	691	721	971	1,160	312	417	714	1,499
89	1,183	1,125	90	352	387	483	830	173	251	550	733
112	1,241	1,116	100	434	422	512	841	207	282	803	747
113	1,332	1,117	90	467	401	519	906	186	265	738	890
122	1,656	1,099	125	429	478	574	986	222	311	590	1,029
97	1,781	1,138	75	599	484	691	1,016	220	350	469	1,578
122	1,377	1,377	92	596	645	869	1,348	271	418	901	1,816
131	2,051	1,252	126	665	576	822	1,291	240	400	466	1,233
143	2,043	1,329	124	678	637	865	1,413	264	402	572	1,270
117	1,748	1,091	95	688	604	741	1,102	228	429	591	1,219
151	2,135	1,220	83	666	653	917	1,017	282	433	494	1,425
122	895	1,085	73	355	393	442	711	186	231	445	850
142	1,098	1,052	71	379	378	445	870	191	359	714	814
151	1,428	1,195	92	458	481	570	1,009	211	370	738	988
123	1,172	1,102	86	511	421	599	951	227	377	548	1,061
142	1,528	1,077	95	529	508	691	999	273	371	436	1,554
127	2,128	1,231	114	561	555	711	1,021	248	434	629	1,219
113	1,972	1,207	108	617	619	726	1,159	270	461	443	1,180
175	1,944	1,239	86	669	664	824	1,237	286	514	503	1,284
136	1,333	1,092	93	614	577	745	1,056	265	487	427	1,271
157	1,459	1,119	83	628	609	903	1,022	270	573	413	1,250

MORTALITY OF THE MONTH

MONTHS.	Total number of deaths.	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Small-pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
June:												
1886	6,316	2,228	35.3	193.65	57	39	50	2	74	56	24	77
1887	7,484	2,020	40.0	240.00	57	54	67	7	109	65	26	58
1888	8,368	3,306	39.7	227.34	40	45	56	11	233	130	25	62
1889	8,370	3,632	43.4	241.82	27	45	59	....	154	64	20	128
1890	9,185	3,515	40.2	217.70	28	69	62	1	68	161	29	95
1891	9,321	3,615	38.8	186.80	42	80	46	....	207	133	41	65
1892	9,075	3,437	37.7	188.50	57	75	62	10	183	255	37	80
1893	8,728	2,885	33.0	162.88	96	83	42	10	154	99	24	77
1894	9,805	3,588	36.6	182.65	32	72	43	24	121	60	15	79
1895	8,736	3,114	35.6	175.25	40	81	35	....	71	217	28	95
July:												
1886	9,376	5,021	53.5	374.68	44	75	61	....	49	80	10	114
1887	11,363	6,049	52.7	389.68	51	102	61	12	69	66	15	48
1888	10,300	5,363	52.0	380.00	35	73	51	2	141	111	23	108
1889	10,806	5,563	51.4	352.20	46	117	61	1	69	33	14	112
1890	11,606	5,602	50.5	327.37	56	101	56	....	45	91	12	133
1891	11,370	5,782	50.8	329.72	57	97	44	....	181	93	19	48
1892	13,555	6,855	52.1	340.00	59	131	61	8	75	150	20	126
1893	12,337	6,246	50.5	324.25	86	87	45	16	79	75	13	92
1894	12,516	6,160	50.0	335.20	50	93	44	19	76	55	14	121
1895	11,681	5,841	50.0	326.21	49	108	26	....	32	130	20	142
August:												
1886	7,142	3,312	46.3	314.20	49	104	66	....	43	45	11	134
1887	9,042	4,130	45.3	383.30	41	194	98	6	55	24	16	57
1888	10,017	4,867	48.7	345.80	29	174	87	6	120	73	9	144
1889	9,373	4,059	40.7	280.75	33	224	96	....	54	22	10	122
1890	10,642	4,480	48.8	292.70	49	167	86	....	35	69	11	153
1891	10,720	4,829	45.0	297.12	38	171	67	....	120	41	14	64
1892	10,903	4,933	45.2	292.00	54	182	56	18	61	51	19	138
1893	11,037	4,954	45.0	298.64	55	157	62	11	63	44	14	129
1894	10,390	4,664	44.8	283.00	44	183	41	6	48	19	17	129
1895	11,050	4,962	45.0	282.75	46	156	39	....	26	76	17	158
September:												
1886	7,239	3,206	44.3	272.88	42	176	74	....	36	26	19	100
1887	8,267	3,218	39.0	261.15	38	248	141	10	83	16	11	44
1888	8,433	3,877	45.9	294.32	31	279	102	12	114	43	11	142
1889	8,264	3,179	38.4	238.26	19	247	98	2	53	9	14	90
1890	9,111	3,356	39.0	224.45	30	234	84	....	40	29	15	102
1891	9,662	3,984	41.2	247.04	59	287	83	....	99	21	13	69
1892	9,610	3,737	38.8	235.90	48	280	74	9	78	37	16	93
1893	9,346	3,718	39.8	248.65	29	227	68	23	34	24	11	85
1894	9,525	3,948	41.5	244.00	28	229	51	9	33	15	11	102
1895	10,011	4,161	41.5	250.00	52	220	50	....	26	36	15	119
October:												
1886	7,370	2,730	37.0	226.20	32	194	118	2	51	53	17	88
1887	7,370	2,317	31.3	201.63	38	182	104	4	113	15	13	14
1888	7,886	2,522	32.0	196.37	33	288	109	12	125	43	19	102
1889	8,050	2,288	28.4	177.00	21	261	87	....	57	7	13	70
1890	8,640	2,665	32.7	155.00	26	240	87	....	62	47	6	84
1891	9,718	3,454	35.5	200.00	47	290	70	....	118	36	14	54
1892	9,092	2,894	31.8	174.72	35	205	72	27	96	26	18	73
1893	8,981	2,994	33.4	185.00	56	253	50	19	65	14	16	56
1894	9,008	2,936	32.5	180.00	22	234	46	5	32	15	6	72
1895	9,320	2,951	31.5	167.00	36	265	50	2	36	46	13	95

OR TEN YEARS — (*Continued*).

Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
80	465	626	911	74	382	323	470	714	188	298	397	702
75	887	587	948	56	516	404	458	784	190	362	597	805
90	811	778	868	94	516	393	491	1,075	237	411	472	1,130
23	1,112	744	919	77	639	386	485	951	222	376	414	1,133
64	1,087	972	984	83	679	497	541	1,000	237	452	347	1,433
19	808	1,098	978	103	720	479	678	1,127	224	534	353	1,286
09	676	1,060	1,005	89	692	449	693	1,132	248	545	368	1,080
59	478	1,010	1,065	67	612	503	679	1,108	240	560	384	1,073
75	739	1,037	982	84	723	583	718	1,180	307	628	419	1,334
38	627	825	974	63	665	592	718	927	275	620	357	1,188
84	2,696	541	949	56	646	357	449	907	166	373	480	939
75	3,669	477	956	90	738	406	429	1,259	227	499	729	1,185
11	2,957	588	966	73	784	383	492	930	210	397	454	1,111
05	3,092	537	1,012	63	844	449	542	1,029	227	357	502	1,394
93	2,916	706	1,073	60	1,024	497	543	1,092	242	553	395	1,718
04	2,906	717	1,032	67	1,036	502	652	1,158	239	458	363	1,397
46	3,629	801	1,093	96	1,264	556	700	1,648	266	842	447	1,503
79	3,206	746	1,073	72	1,219	552	729	1,252	300	598	383	1,333
70	3,258	688	1,094	64	1,184	527	638	1,282	296	683	392	1,468
23	2,974	627	1,040	83	1,135	599	732	1,000	322	549	364	1,425
07	1,484	480	861	58	528	330	309	657	153	266	458	798
02	2,158	457	926	67	665	361	442	933	199	354	731	956
45	2,465	528	959	74	647	402	473	1,010	227	370	530	1,345
27	1,901	591	1,026	63	680	437	540	936	254	373	477	1,196
33	2,192	666	1,064	70	871	442	537	1,125	236	512	375	1,749
66	2,405	675	1,041	87	925	480	612	1,133	257	617	477	1,235
75	2,328	704	1,056	73	985	512	662	1,208	279	572	369	1,301
28	2,406	661	1,040	13	986	534	676	1,167	283	600	432	1,314
83	2,068	621	1,031	71	945	573	626	1,011	295	543	405	1,331
05	2,303	668	1,051	67	1,027	523	741	1,034	357	597	457	1,404
22	1,186	497	919	61	588	352	386	674	165	298	474	843
59	1,009	697	989	45	522	352	503	722	232	331	765	959
08	1,440	649	895	69	600	343	494	895	198	303	510	995
43	1,094	646	946	65	638	794	483	870	206	326	446	872
47	1,196	710	1,027	47	768	418	520	871	236	375	450	1,712
34	1,434	720	1,039	65	924	479	596	997	289	449	421	1,293
72	1,266	834	1,010	69	877	502	629	898	280	459	461	1,208
11	1,395	713	912	68	863	528	597	1,026	268	443	391	1,221
89	1,454	668	988	54	852	492	612	970	268	488	399	1,413
22	1,672	675	1,009	65	923	577	703	988	277	522	452	1,308
18	493	845	985	50	497	366	409	692	193	294	549	825
07	297	853	942	53	458	367	475	759	207	309	717	743
32	386	1,031	1,034	70	518	392	495	791	232	278	512	984
70	339	959	1,016	64	557	431	595	899	238	343	491	1,032
82	360	1,001	1,061	71	635	485	597	884	238	366	470	1,538
27	794	1,012	1,124	60	832	558	695	1,023	259	430	494	1,281
51	491	1,132	996	62	709	547	694	1,024	263	448	420	1,198
99	533	947	1,070	58	771	542	658	1,010	273	422	363	1,206
51	635	901	1,013	54	757	540	690	959	298	452	477	1,249
58	554	749	1,112	67	761	630	767	840	319	511	445	1,564

MORTALITY OF THE MONTHS

MONTHS.	Total number of deaths.	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Small-pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
November:												
1886	6,572	2,423	35.2	213.33	47	157	98	1	68	185	18	
1887	7,292	2,171	29.7	200.00	29	149	80	4	130	30	25	
1888	6,987	2,111	30.2	174.88	21	153	61	8	171	52	16	
1889	7,285	2,025	27.7	139.60	21	169	63	....	56	25	21	
1890	8,209	2,199	28.5	146.00	29	216	68	....	102	74	17	
1891	8,727	2,528	29.0	151.06	39	241	61	2	179	31	26	
1892	8,448	2,540	30.1	167.19	39	184	50	18	127	51	26	
1893	8,458	2,324	27.5	157.00	45	180	30	27	77	56	14	
1894	8,146	2,254	27.6	151.85	25	189	30	10	52	15	17	
1895	8,372	2,287	27.4	134.62	24	204	43	....	51	96	18	
December:												
1886	7,603	2,868	37.3	200.00	50	112	85	5	69	333	42	
1887	7,886	2,497	31.6	190.00	36	104	78	12	204	44	25	
1888	8,379	2,495	29.8	179.00	28	138	49	13	278	138	33	
1889	8,483	2,341	27.6	126.35	38	117	53	....	73	33	22	
1890	8,761	2,635	30.0	135.93	30	157	59	....	144	117	36	
1891	11,241	3,023	26.9	133.45	32	183	47	....	246	78	33	
1892	9,528	2,754	28.9	146.41	24	147	40	17	195	82	22	
1893	10,666	2,824	26.7	117.25	46	158	27	35	106	70	25	
1894	9,000	2,567	28.5	133.60	33	139	35	11	82	35	34	
1895												

TEN YEARS — (*Concluded*).

Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of the circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
166	1,056	982	70	328	361	448	576	166	264	494	661
117	1,041	964	67	370	375	490	709	178	301	718	640
112	1,051	893	58	414	398	522	796	164	300	443	726
110	1,133	944	67	450	452	599	822	199	311	419	868
124	1,207	1,019	74	518	435	554	851	208	387	409	1,388
143	1,507	1,017	65	583	501	656	967	237	404	437	1,033
137	1,445	940	55	582	490	674	845	244	377	382	1,008
152	1,242	957	57	595	529	691	925	242	411	469	1,009
146	1,130	1,020	48	566	575	661	880	262	383	392	991
150	1,348	979	71	583	584	750	798	263	473	370	1,027
107	1,427	1,047	62	338	376	474	781	167	233	537	644
78	1,205	1,022	76	441	408	543	798	208	295	761	636
87	1,392	1,017	95	431	461	584	917	232	345	577	817
110	1,635	1,127	83	463	466	656	950	238	288	455	1,046
80	1,756	1,045	85	533	483	643	1,000	257	285	454	1,029
115	2,731	1,090	100	646	593	801	1,183	296	416	732	1,153
113	1,737	1,145	78	575	572	779	1,132	259	404	416	1,026
123	2,445	1,099	80	581	610	792	1,078	254	359	724	1,237
103	1,555	1,117	58	551	628	719	1,033	269	284	401	1,088

To summarize the mortality, so far as it is influenced by season, by age, by zymotic diseases, and by consumption, the following table, showing this for the past eight years, is prepared:

COMPARATIVE MORTALITY FOR THE FOUR SEASONS.

SEASONS.	Total number of deaths.	Percentage of the total mortality for the year.	Percentage of the deaths under five years of age.	Zymotic deaths per 1,000 deaths from all causes.	Deaths from consumption per 1,000 deaths from all causes.
1888.					
In the winter months	25,267	24.19	32.00	177.36	127.55
In the spring months	26,711	25.57	31.00	146.97	132.90
In the summer months	28,865	27.46	46.83	317.72	97.40
In the fall months	23,306	22.31	36.00	222.86	121.12
1889.					
In the winter months	24,889	23.88	33.60	173.73	121.53
In the spring months	26,982	25.89	34.36	166.33	125.60
In the summer months	28,549	27.39	45.16	303.47	103.57
In the fall months	23,600	22.64	31.50	187.12	123.25
1890.					
In the winter months	29,435	25.19	23.42	108.50	141.13
In the spring months	26,811	22.95	31.14	120.78	124.75
In the summer months	29,817	25.52	45.60	283.70	100.00
In the fall months	24,490	20.94	33.60	176.00	123.45
1891.					
In the winter months	27,014	21.81	30.78	138.62	119.84
In the spring months	38,866	28.15	28.23	100.24	112.69
In the summer months	34,411	25.36	45.29	279.39	97.13
In the fall months	28,107	22.69	35.46	201.38	113.14
1892.					
In the winter months	35,456	28.07	26.53	120.35	100.74
In the spring months	31,791	25.17	27.92	130.36	117.36
In the summer months	33,533	26.55	45.40	283.45	94.06
In the fall months	27,150	21.50	33.78	194.00	108.51
1893.					
In the winter months	29,371	23.92	20.66	139.52	108.85
In the spring months	34,583	28.16	23.68	120.13	111.45
In the summer months	32,102	26.11	33.92	238.90	99.00
In the fall months	26,785	21.81	21.74	198.00	109.71
1894.					
In the winter months	30,965	25.85	21.38	122.10	106.60
In the spring months	29,424	24.54	21.44	137.40	117.37
In the summer months	32,711	27.26	34.75	267.00	94.85
In the fall months	26,674	22.25	22.40	194.10	113.25
1895.					
In the winter months	30,751	25.35	20.93	106.27	114.50
In the spring months	31,376	25.86	23.30	109.90	116.10
In the summer months	31,467	25.94	33.29	261.40	97.40
In the fall months	27,703	22.85	22.48	183.87	112.00

Finally, respecting the influence of season in the prevalence of the different zymotic diseases, the following table shows their relative prevalence among themselves; it gives the proportion of each to the total zymotic mortality for each season year by year for the past eleven years.

WINTER.

YEARS.	Total zymotic diseases.	Total per 10,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Diphtheria.	Diarrhœal diseases.
1885	3,306	135.85	3 5	7.4	6.4	.....	11.0	13.5	3.2	4 9	41.9	8.7
1886	3,265	161.51	3.1	5.6	5.5	0.5	11.3	1.4	3 3	12.0	47.6	7.2
1887	3,882	177.30	3.9	6.3	5.0	1.2	6.5	24.0	2.5	4.0	39.1	7.1
1888	4,077	177.36	2.5	7.4	4.4	1.0	16.5	4.0	2.2	2.6	51.1	6.8
1889	4,324	173.73	2.1	6.8	3.0	0 8	19.5	10.1	2 1	7.7	41.3	6.0
1890	3,192	105.00	3.2	10.0	4.7	.....	8.2	3.9	2.6	9.0	49.0	9.0
1891	3,599	138.62	3.2	11.7	3.7	.....	14.9	10.6	3.4	6.7	39.0	9.6
1892	4,267	120 35	3.4	9.3	2.8	0.2	19.5	5.8	3 8	3.0	45.0	7.2
1893	4,128	139.52	2.8	9.2	2.6	1.4	15.8	6.2	3.3	7.4	43.3	9.0
1894	3,891	122.10	3.6	8.9	2.0	3.0	10 0	8.1	2.9	4.8	48.8	7.8
1895	3,215	106.27	3.8	10.8	2.3	0.6	8.8	3.5	3.3	6.8	49.5	9.8

SPRING.

1885	3,130	144.44	4.0	5.9	7.0	.....	12.7	17.1	4.6	5.4	31.9	11.3
1886	3,110	142.70	5.8	6.1	7.3	0.6	11.7	2.9	4.4	11.0	40.7	9.3
1887	3,899	167.05	3.8	4.2	5.0	2.0	8.3	9.2	3.3	2 7	38.9	22.5
1888	4,074	146.97	4.7	4 5	4.4	2 6	18.8	6.0	3.2	3.5	43 1	8.7
1889	4,488	166.33	2.6	4.6	3.2	.....	22.8	9.0	2.6	9.2	37.2	8.0
1890	3,363	117.90	4.7	6.4	4.0	.....	8.5	14.5	3 7	7.6	40.7	10.0
1891	3,695	100.24	5.0	8.4	3.3	.....	9.4	13.5	3.2	8.3	30.3	9.5
1892	4,144	130.36	5.4	5.9	3.1	0.7	18.8	12.8	4.6	4.3	36.2	8.5
1893	4,155	120.13	8.5	7.7	2.6	1.7	14.7	5.8	3.3	10.3	33.7	11.6
1894	4,119	137.40	3 8	7.5	2.1	3.3	13.8	10.0	3.2	7.2	39 2	9.1
1895	3,444	109.90	5.1	8.8	2.7	.....	9.6	12.0	4.4	7.8	33.4	13.0

Percentage of deaths from each zymotic disease to total zymotic mortality, etc.—(Concluded).

SUMMER.

YEARS.	Total zymotic diseases.	Total per 1,000 deaths from all causes.	Cerebro-spinal fever.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Diphtheria.	Diarrhœal diseases.
1885	7,663	325.74	1.6	2.8	3.5	.....	3.3	3.3	0.8	3.2	11.2	70.1
1886	7,027	294.18	2.1	3.1	2.5	.....	2.3	2.6	0.7	5.3	15.3	66.3
1887	9,174	337.66	1.6	3.8	2.5	0.3	2.5	1.4	0.6	1.5	12.5	73.0
1888	9,267	317 72	1.1	3.1	2.1	0.2	5.3	3.4	0.6	3.4	13.5	67.2
1889	8,074	305.47	1.2	4.4	2.4	.....	3.1	1.3	0.5	4.2	12.1	70.3
1890	8,454	216.40	1.5	3.9	2.4	.....	1.7	3.7	0.6	4.3	10.4	71.4
1891	8,776	279.39	1.5	3.8	1 8	.....	5.7	3.0	0.8	2.0	10.1	70.8
1892	9,505	383.45	1.8	4.1	1.9	0.4	3.4	4.8	0.8	3.4	9.7	69.8
1893	8,789	238.90	2.7	3.7	1.8	0 4	3.4	2.5	0.6	3.9	12.1	69 3
1894	9,928	267.00	1.2	3.5	1.3	0.5	2.4	1.7	0.5	3.3	14.3	61.0
1895	8,461	261.40	1.8	4.0	1.2	.....	1.5	5.0	0.8	4.6	11.5	70.0

AUTUMN.

1885	3,751	209.05	2.2	11.2	7.1	0.5	4.5	0.9	1.2	5.6	32.5	34.2
1886	4,725	237.46	2.5	11.1	6.1	.....	3.3	5.6	1.2	5.0	34.2	30.6
1887	5,076	220.93	2.1	11.5	6.5	0.4	6.5	1.2	1.0	1.5	42.2	28.0
1888	5,153	221.86	1.6	14.0	5.3	0.6	8.0	2.5	0.7	6.5	23.0	37.6
1889	3,415	187 12	1.7	19.8	7.2	.....	4.8	1.2	1.4	6.2	41.4	45.1
1890	4,326	170.60	2.0	15.4	5.4	.....	4.6	3.5	0.9	5.7	24.2	38.0
1891	5,660	201.38	2.5	14 4	3.8	.....	6.9	1.5	0.9	2.5	25.2	41.9
1892	5,283	194.00	2.3	12.7	3.7	1.0	5.7	2 2	1.1	4.7	30.7	35.9
1893	5,314	198.00	2.8	12.4	2.7	1.3	3.3	1.8	0.8	3.5	32.2	39.2
1894	5,177	194.10	1.5	12.6	2.5	0.4	2.3	0.9	0.6	4.5	31.7	43.1
1895	5,193	183.87	2.1	13.6	2 8	.....	2 1	3.4	0.9	5.2	24.3	45.7

THE ZYMOTIC MORTALITY IN 1895.

en common diseases infectious in character are included
ass of zymotic diseases; cerebro-spinal meningitis, typhoid
ıalarial diseases, small-pox, scarlet fever, measles, ery-
whooping cough, diphtheria, included with which is croup,
rrhoeal diseases. It does not include consumption, which
d separately, nor pneumonia, puerperal diseases nor other
which while having zymotic relations and to a certain
preventible, have a separate bearing on the work of health
from these. The following is a comparison with other

	Deaths from zymotic diseases.	Average daily mortality from zymotic diseases.	Deaths from zymotic diseases per 1,000 deaths from all causes.	Deaths from zymotic diseases per 100,000 population.
.....	22,950	63	220.80	3.82
.....	21,961	60	207.66	3.58
.....	19,598	54	175.00	3.14
.....	21,826	57	178.80	3.42
.....	23,200	64	181.18	3.57
.....	22,346	61	181.85	3.32
.....	22,115	60	185.00	3.35
.....	22,313	61	184.00	3.40

ıumber of living population to one death from zymotic dis-
ıring the year was, 291; this corresponds exactly with the
number for the seven years preceding.

proportion of deaths to deaths from all causes was less this
4 per thousand; the average ratio for seven years past has
0.

ıctual number of deaths from this class of diseases, not
into account the increase in population, was greater than
wo years preceding, but was exceeded in 1892 and in 1888.

EPIDEMIC INFLUENZA (GRIPPE).

The fifth annual recurrence of this disease since the first in December, 1889, began suddenly this year, in January. It lasted four months, and is estimated to have caused 1,400 deaths in January, 1,600 in February, 1,500 in March, and 600 in April. It was much severer than that of 1894, which from its mildness, gave occasion to the anticipation of its permanent suspension. Its duration has, however, been less for the last two years.

The following is a tabulation of the series of six annual epidemics, showing the time of occurrence, duration and mortality of each:

TIME OF OCCURRENCE.	Acme reached.	Duration.	Number of deaths.
1889-90	January, 1890	Three months	5,000
Spring of 1891	April, 1891	Six months	8,000
1891-2	January, 1892	Five months	8,000
1893	April, 1893	Six months	6,000
1893-4	January, 1894	Four months	3,000
1895	February, 1895	Four months	5,100

TYPHOID FEVER.

There were 1,687 deaths from this cause in the State during the year, which is about the same as occurred during each of the past five or six years.

It caused 13.6 per cent. of the zymotic deaths in the autumn months, 10.8 per cent. in the winter, 8.8 per cent. in the spring, and 4.0 in the summer.

As to the distribution of typhoid fever, the following shows its relative proportion to the total mortality in the various sanitary districts for the year and for the ten years preceding:

In each 1,000 *deaths there were from typhoid fever in the —*

DISTRICTS.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Maritime	8.87	8.41	8.55	8.66	9.65	9.26	8.81	8.50	8.75	8.00	7.45
Hudson Valley	27.85	27.28	27.27	32.2	23.14	20.36	30.47	18.86	23.65	23.10	31.40
Adirondack and Northern	19.35	20.58	24.00	18.34	23.01	13.33	19.60	19.63	20.40	21.78	25.60
Mohawk Valley	19.53	21.91	20.45	21.98	21.32	30.71	27.76	27.69	21.45	22.10	20.00
Southern Tier	23.55	26.00	30.40	28.38	33.92	23.61	28.39	21.69	21.75	20.50	25.42
East Central	19.64	27.45	20.50	28.65	24.00	18.50	26.40	14.22	18.23	22.15	19.50
West Central	24.78	20.42	19.05	17.28	19.53	17.9	17.57	14.03	15.90	16.00	19.75
Lake Ontario and Western	20.85	19.18	19.05	23.07	21.28	21.58	23.55	22.76	21.04	24.75	20.00
The entire State	13.27	13.47	13.75	14.18	14.86	13.79	15.52	13.25	13.51	14.00	13.80

As showing the distribution of typhoid fever in relation to the density of population:

In each 100,000 *population, there were in the* —

DISTRICTS.	Percentage of city population, 1894.	DEATHS FROM TYPHOID FEVER.		
		1893.	1894.	1895.
Maritime	89.50	19.8	16.0	15.7
Hudson Valley	40.72	41.6	40.6	54.0
Adirondack and Northern	7.50	24.0	25.3	29.5
Mohawk Valley	30.93	30.0	32.0	29.0
Southern Tier	28.75	25.4	30.3	30.0
East Central	24.75	24.0	31.3	28.0
West Central	12.50	21.3	20.6	26.0
Lake Ontario and Western	64.50	34.2	37.5	31.0
Entire State	63.00	25.3	24.5	25.8

As showing the distribution of typhoid fever in large cities, as contrasted with the country, there were in four cities, having an aggregate of 3,500,000 population, 609 deaths, or a death rate per 100,000 population of 17.4. These cities have a fairly pure water supply.

In the rest of the State, including cities of the second class, and having a less aggregate population, there were 1,078 deaths, and a death rate of 33.00.

In rural towns, classed in the Bulletin under "Rest of District," and with a population of about 1,500,000, there were 25 deaths per 100,000 population. This is a low rate for rural towns.

The chief mortality has been in cities of the second and third class, and especially in Watertown and Albany, where epidemics prevail during the year. In these cities and large villages, whose aggregate population was about 1,500,000, the death rate was 47.0.

DIPHTHERIA.

There were 5,098 deaths from this cause, the largest of any of the zymotic diseases, except the diarrhoeal diseases.

Of these 1,610 occurred in the winter months, 1,259 in the spring, 966 in the summer, and 1,263 in the autumn. The largest number of deaths occurred in January. There has been a steady diminution in the mortality during the year, until the usual fall increase, and this has been less than usual. There have not been so few deaths from diphtheria for several years as during 1895, the average for the three years preceding being, 6,276 deaths.

As to its distribution, in relation to other diseases:

In each 1,000 *deaths there were from diphtheria in the—*

DISTRICTS.	1885.	1886.	1887.	1888.	1889.	1890.	1891	1892.	1893.	1894.	1895.
Maritime	58.28	71.43	75.40	67.95	63.00	49.10	46.41	47.90	51.14	70.82	52.12
Hudson Valley	64.87	61.93	58.50	64.27	65.00	13.30	30.96	56.36	41.65	30.83	29.00
Adirondack and Northern	72.08	43.35	49.00	46.57	33.87	37.90	31.13	29.33	40.58	24.00	18.80
Mohawk Valley	44.74	36.80	67.40	65.52	52.12	52.72	31.45	45.63	38.00	28.50	15.00
Southern Tier	27.57	41.03	44.40	34.18	34.54	35.28	41.97	50.26	60.68	37.10	25.25
East Central	32.74	40.34	30.60	43.10	33.79	22.78	17.40	31.35	46.78	30.54	15.80
West Central	22.63	20.42	30.80	23.38	27.07	16.38	8.91	19.31	43.35	21.50	12.25
Lake Ontario and Western	49.53	58.25	58.67	51.09	35.78	32.64	42.03	57.11	39.38	37.75	42.75
The entire State	56.06	64.48	67.24	61.73	56.12	42.07	40.78	46.86	48.00	55.25	42.00

As to distribution, in relation to population, and density of population:

In each 100,000 *population there were from diphtheria in the—*

DISTRICTS.	Percentage of city population.	DEATHS FROM DIPHTHERIA.		
		1893.	1894.	1895.
Maritime	89.50	114.7	144.7	110.0
Hudson Valley	40.72	82.0	54.0	50.0
Adirondack and Northern	7.50	45.3	31.5	21.0
Mohawk Valley	30.93	57.45	41.0	22.0
Southern Tier	28.75	77.0	45.5	30.2
East Central	24.75	66.5	42.7	27.0
West Central	12.50	47.9	27.6	16.2
Lake Ontario and Western	64.50	64.5	57.6	65.0
Entire State	63.00	89.0	96.0	42.1

As showing the urban in contrast with the rural distribution of diphtheria, in four large cities having an aggregate population of 3,500,000, there were 3,800 deaths from this disease, giving a death rate per 100,000 population of 108.5; in rural districts having an aggregate population of 1,500,000, there were 400 deaths, giving a death rate of 26.5.

In the smaller cities and large villages there were 900 deaths, which occurred in a population of 1,500,000 inhabitants, giving there a death rate per 100,000 inhabitants of 60.00.

Manifestly, diphtheria is a disease of closely aggregated communities, and its condition of prevalence are much different from those of typhoid fever, note of the distribution of which has already been made.

SCARLET FEVER.

The mortality from scarlet fever has been exceptionally low during 1895. The following is the reported mortality for the past eight years: In 1888, 2,378; in 1889, 2,321; in 1890, 832; in 1891, 2,173; in 1892, 2,228; in 1893, 1,715; in 1894, 1,321; in 1895, 857. It caused 0.7 per cent. of the total mortality, and 3.8 per cent. of the zymotic.

There were 332 deaths in the spring months, 283 in the winter, 129 in the summer, and 113 in the autumn. It is a disease of the

first half of the year, and the relative proportions of this year correspond with the average of the past ten years, which shows a yearly total of 1,586; of these 564 occurred in the spring months, 508 in the winter, 278 in the summer and 236 in the autumn.

As to its distribution, the proportion of deaths to the living population in the sanitary districts is shown by the following:

In each 100,000 *population there were in the —*

DISTRICTS.	Percentage of city population.	DEATHS FROM SCARLET FEVER.		
		1893.	1894.	1895.
Maritime	89.50	30.3	22.0	17.7
Hudson Valley	40.72	33.8	25.0	13.7
Adirondack and Northern	7.50	10.9	6.5	7.8
Mohawk Valley	30.93	16.7	18.6	6.5
Southern Tier	28.75	17.5	8.1	2.5
East Central	24.75	7.2	7.5	7.0
West Central	12.50	10.0	8.4	2.2
Lake Ontario and Western	64.50	32.0	15.7	5.2

The disease continued, as in 1894, to be largely limited to the eastern part of the State.

MEASLES.

In the eastern part of the State measles have been exceedingly prevalent; it caused 1,129 deaths, and of these 721 occurred in the Maritime and Hudson Valley districts.

Measles is very variable in occurrence, depending on its epidemic prevalence; a foregoing table will show its mortality month by month since 1888.

The following table shows its death rate per 100,000 population in the sanitary districts during 1895:

In each 100,000 *population there were in the —*

	Deaths from measles.
Maritime district	27.0
Hudson Valley district	7.0
Adirondack and Northern district	0.8
Mohawk Valley district	.....
Southern Tier district	15.0
East Central district	7.5
West Central district	1.6
Lake Ontario and Western district	16.0

WHOOPING COUGH.

The mortality from whooping cough was greater than that from measles, and usually this is the case, although both diseases are subject to great variability of prevalence. The number of deaths from it for years past is as follows: In 1888 there were 902 deaths from it; in 1889, 1,332; in 1890, 1,169; in 1891, 835; in 1892, 880; in 1893, 1,212; in 1894, 1,040; and in 1895, 1,150.

There were more deaths from this cause in August, 1895, than in any one month on our records, and it is noted that August is uniformly the month of greatest mortality for it. The average number of deaths per month in August during the past ten years has been 120, against an average for the other months of the year of 79. July and September come next to August in its mortality.

The average annual death-rate per 100,000 population for ten years from whooping cough, month by month, has been:

In January	18.00
In February	16.00
In March	19.45
In April	18.60
In May	15.73
In June	14.82
In July	21.24
In August	24.60
In September	18.80
In October	14.00
In November	10.80
In December	13.37

As to distribution:

In each 100,000 *population there were from whooping cough in the—*

	Deaths
Maritime district	23.8
Hudson Valley district	15.8
Adirondack and Northern district	5.3
Mohawk Valley district	9.5
Southern Tier district	9.7
East Central district	6.0
West Central district	5.6
Lake Ontario and Western district	9.5

DIARRHOEAL DISEASES.

There were 9,043 deaths from diarrhoeal diseases, or 7.45 per cent. of the total mortality. It is from this cause that the summer mortality, especially that of July, is so large. The diarrhoeal mortality of the summer months constituted 70.0 per cent. of the deaths from zymotic diseases, 45.7 of the autumn, 13.0 per cent. of the spring, and 9.8 per cent. of the winter.

As to distribution:

In each 1,000 *total mortality there were from diarrhœal diseases, in the—*

DISTRICTS.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Maritime	106.00	91.31	107.00	91.58	86.04	82.58	82.29	86.10	80.00	80.00	80.85
Hudson Valley	62.63	63.48	71 30	67.08	61.30	40.64	58.97	59.56	56.67	61.58	65.75
Adirondack and Northern	46.54	58.06	63.00	60.55	62.00	43.28	69.23	45.88	42.65	56.44	52.90
Mohawk Valley	57.65	53.93	73.60	61.60	65.90	56.39	52.69	41.54	53.26	62.50	56.00
Southern Tier	55.70	59.88	71.00	54.02	58.11	52.72	53.37	41.95	50.00	57.50	50.45
East Central	59.74	51.20	56.60	72.71	80.65	57.34	68.47	46.29	48.13	61.85	53.45
West Central	49.67	54.47	58.30	37.96	46.53	44.54	37.87	28.51	37.90	39.00	45.25
Lake Ontario and Western	60.00	80.07	113.10	99.43	88.63	75.90	73.22	78.09	97.95	102.40	90.00
The entire State	90.80	80.97	96.00	84.00	79.56	72.48	74.15	72.72	73.30	91.00	74.55

listribution in relation to density of population:

In each 100,000 *population, there were in the—*

DISTRICTS.	Percentage of city population.	Deaths from diarrhœal diseases per 100,000 population.
.....	90.00	80.85
lley	40.50	65.75
: and Northern	7.50	52.90
alley	31.00	56.00
ier	30.00	50.45
al	25.00	53.43
al	13.00	45.25
io and Western	65.00	90.00

MALARIAL DISEASES.

were but 310 deaths reported from this cause, which is spicuous disease in this State.

onstituted 2.3 per cent. of the zymotic deaths in the winhs, 2.7 per cent. in the spring, 1.2 per cent. in the sum- 2.8 per cent. in the autumn months.

istribution, it is most prevalent in the Maritime district, by the following table:

100,000 *population, there were from malarial diseases—*

	Deaths from malarial diseases.
time district	8.0
on Valley district	7.5
ondack and Northern district	0.8
wk Valley district	2.5
hern Tier district	3.2
Central district	4.0
Central district	4.6
Ontario and Western district	3.5

CEREBRO-SPINAL MENINGITIS.*

There has been no special prevalence of this disease for years, the average annual mortality for the past eight years being 576, with no very great deviation from this each year; during 1895 there were 539 deaths reported from it.

In each 100,000 *population, there were—*

	Deaths from cerebro-spinal meningitis.
In the Maritime district	9.60
In the Hudson Valley district	8.00
In the Adirondack and Northern district	4.50
In the Mohawk Valley district	6.50
In the Southern Tier district	4.00
In the East Central district	7.10
In the West Central district	4.00
In the Lake Ontario and Western district	6.80

SMALL-POX.

There were only 11 deaths from small-pox during 1895, all of which occurred in New York, except one in Brooklyn. Eight of these deaths occurred in January and February, one in May and two in October.

It has not developed elsewhere in the State during the year.

Passing to causes of death other than those of the common zymotic diseases, the first intimately related to them is

CONSUMPTION.

There were 13,330 deaths from this cause during the year; the average yearly mortality for ten years preceding was 12,616. Its mortality occurs with but little varying regularity, the seasons during which grippe was prevalent increasing the number of deaths reported from it.

In the winter months 11.45 per cent. of the deaths from all causes were from consumption; in the spring months, 11.60 per

* It is suggested that this disease be uniformly returned under the name of cerebro-spinal meningitis, instead of cerebro-spinal fever, which seems to have disappeared from modern text-books.

cent.; in the summer, 9.75 per cent.; and in the autumn, 11.20 per cent.

These proportions are the uniform record of years past, as may be seen by reference to a table on a preceding page on the effect of season on mortality.

November and June are uniformly the months of least mortality from consumption, and January that of greatest.

The following shows the annual death rate per 100,000 population from consumption, computed from the average number of deaths in a year for ten years, for each month:

In January, 240.00 deaths per 100,000 population annually.
In February, 279.60 deaths per 100,000 population annually.
In March, 231.67 deaths per 100,000 population annually.
In April, 240.00 deaths per 100,000 population annually.
In May, 224.20 deaths per 100,000 population annually.
In June, 192.60 deaths per 100,000 population annually.
In July, 202.70 deaths per 100,000 population annually.
In August, 199.32 deaths per 100,000 population annually.
In September, 194.80 deaths per 100,000 population annually.
In October, 203.55 deaths per 100,000 population annually.
In November, 194.20 deaths per 100,000 population annually.
In December, 208.07 deaths per 100,000 population annually.

The following table shows for a number of years the proportions of deaths from consumption to the deaths from all causes for the entire State and for the sanitary districts:

LOCAL DISEASES.

The following shows the proportion, respectively, of acute respiratory diseases, and diseases of the digestive, urinary, circulatory and nervous systems for a period of ten years.

From digestive diseases, diarrhoeal diseases are excluded.

In each 1,000 *deaths from all causes there were in —*

DEATHS FROM —	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Acute respiratory diseases.....	131	120	132	133	155	167	162	160	140	156
Diseases of the digestive system.	58	58	59	62	64	66	70	71	73	73
Diseases of the urinary system...	50	48	47	55	49	55	51	56	58	61
Diseases of the circulatory system	60	60	61	66	63	68	71	73	71	81
Diseases of the nervous system ..	101	103	107	108	102	106	111	111	108	98

The following shows the seasonal distribution, giving the proportion of deaths occurring in each of the four seasons to the total mortality for the same period, for 1895:

In each 1,000 *deaths there were in the —*

DEATHS FROM —	Winter.	Spring.	Summer.	Autumn.
Acute respiratory diseases	216	190	67	100
Diseases of the digestive system.....	57	60	89	82
Diseases of the urinary system.....	62	65	54	64
Diseases of the circulatory system...	83	89	69	80
Diseases of the nervous system.....	100	105	94	94

The following table shows a sort of normal ratio of the seasonal prevalence of these diseases, being based on the average mortality for ten years; the average reporting population for the ten years is taken at 6,000,000, showing the number of deaths per 100,000 population per annum:

In each 100,000 *population there were* (*average* 10 *years*), *in the* —

DEATHS FROM —	Winter.	Spring.	Summer.	Autumn.
Acute respiratory diseases	95	93	35	47
Diseases of digestive system	25	27	40	32
Diseases of urinary system	25	27	23	24
Diseases of circulatory system	33	35	29	30
Diseases of nervous system	50	52	52	43

As to the distribution of these local diseases, the following shows their respective prevalence in the sanitary districts during 1895:

In each 100,000 *population there were deaths from* —

DISTRICTS.	Acute respiratory diseases.	Diseases of digestive system.	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.
Maritime	328.5	156.0	137.0	150.0	163.0
Hudson Valley	235.0	112.0	100.0	146.0	235.0
Adirondack and Northern	125.0	85.5	50.0	120.0	142.5
Mohawk Valley	200.0	105.0	91.0	140.0	180.0
Southern Tier	152.5	92.5	68.7	118.7	144.0
East Central	168.0	103.5	80.0	150.0	172.0
West Central	149.0	114.0	84.0	150.0	178.5
Lake Ontario and Western	200.0	80.0	77.5	140.0	190.0

DEVELOPMENTAL AND VIOLENT DISEASES.

Cancer being included in this category along with deaths from accidents and violence, from old age, and from unclassified causes, which include feebleness of constitution and conditions such as premature birth, as well as those returns which give indefinite causes of death which can not be classed elsewhere, the number of deaths from these, respectively, during the year, were as follows: From cancer, 3,517; from accidents and violence, 5,741; from old age, 5,567; and unclassified, 16,385.

As to the seasonal occurrence of these deaths, the following shows the number of deaths per 100,000 population from them in the four seasons of the year:

Deaths per 100,000 *population from—*

	Cancer.	Accidents and violence.	Old age.	Unclassified.
In winter months	12.8	17.4	23.1	66.0
In spring months	13.3	20.7	26.3	65.7
In summer months	17.7	27.2	18.1	61.8
In fall months	13.3	23.0	19.5	60.0
Entire year	55.0	88.5	86.0	252.5

Cancer caused fewest deaths in the winter and most in the summer months.

There were more deaths from accident in the summer and autumn than in the winter and spring, many being due to death by drowning.

More succumb to the infirmities of age in the winter and spring than in the summer and fall.

The distribution by districts of deaths from cancer, accidents and violence, and old age is shown in the following:

Showing the number of deaths per 100,000 *population from—*

IN THE—	Cancer.	Accidents and violence.	Old age.
Maritime district	51.1	106.0	39.5
Hudson Valley district	50.1	67.5	112.5
Adirondack and Northern district	44.5	46.5	125.0
Mohawk Valley district	56.0	61.5	135.5
Southern Tier district	44.2	61.2	144.0
East Central district	66.0	66.0	135.0
West Central district	54.0	50.0	163.0
Lake Ontario and Western district	54.5	66.5	100.0

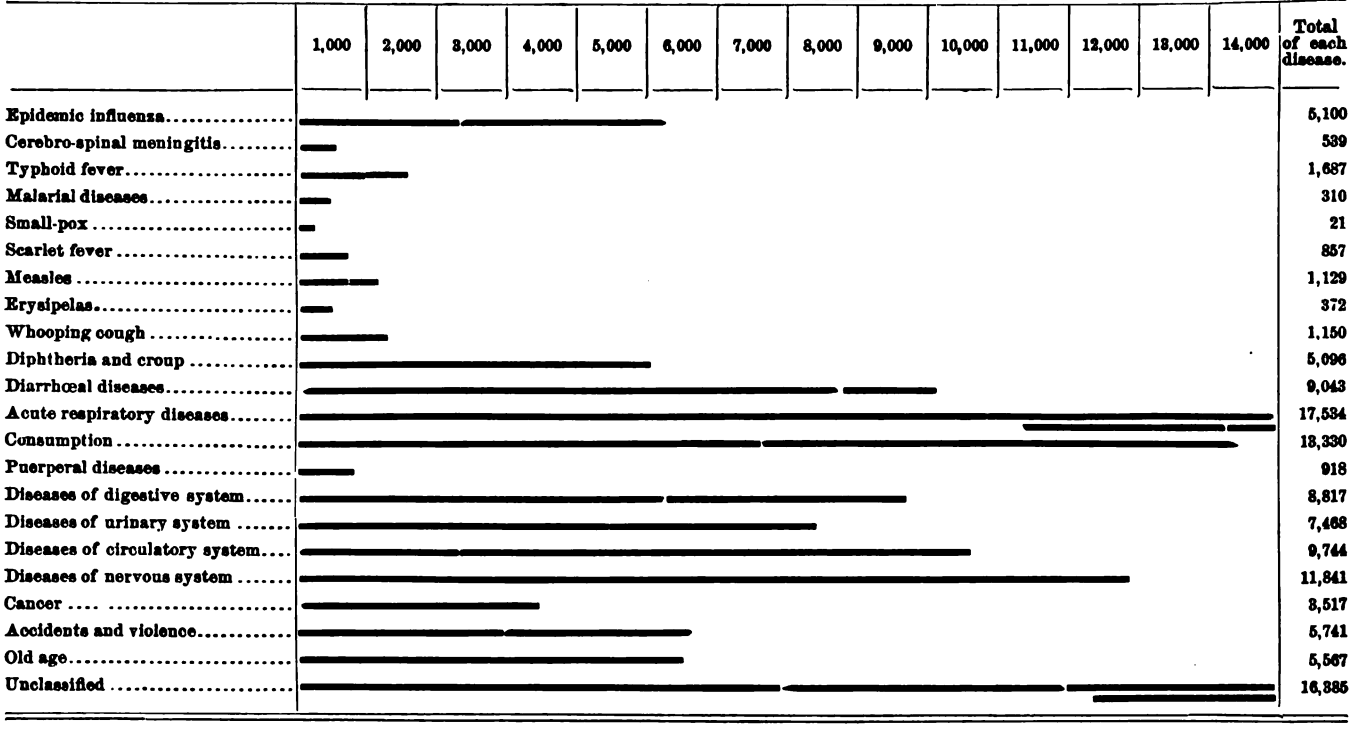
The record for the year indicates no rule for the variable prevalence of cancer.

Accidents cause more deaths in the urban than in the rural districts.

Old age is reached and reported as a cause of death to a very much greater degree in the rural than in the urban districts.

SUMMARY OF MORTALITY FOR 1890.

Total number of deaths from all causes as reported in the Monthly Bulletin, 121,297; zymotic mortality, 17.81 per cent. of the total.



Relative area, density of population, and death-rates in the sanitary districts for 1895.

DISTRICTS.	Area in square miles.	Population per square mile.	Percentage, city population.	Death rate per 1,000 population (annual).	Percentage, deaths under 5 years of age.	In Each 1,000 Deaths from All Causes there were from						
						All zymotic diseases.	Typhoid fever.	Scarlet fever.	Diphtheria and croup.	Diarrhoeal diseases.	Consumption.	Acute respiratory diseases.
Maritime	2,286	1,535	90.0	21 20	40.8	181.10	7.60	8.40	51.58	80.75	112.00	157.50
Hudson Valley	5,872	117	40.5	18.70	26.4	161.00	33.00	7.00	28.00	63.10	107.00	140.00
Adirondack and Northern	15,080	26	7.5	13.00	21.2	93.20	25.35	6.75	18.52	53.00	114.50	107.65
Mohawk Valley	4,731	80	31.0	15.30	21.2	106.70	19.56	4.65	11.20	55.41	113.45	113.25
Southern Tier	6,545	62	30.0	12.00	20.0	117.20	26.85	1.45	20.75	50.84	86.00	127.30
East Central	6,555	59	25.0	15.50	20.0	108.85	19.75	6.10	13.10	55.92	98.50	120.80
West Central	4,746	65	13.0	13.40	14.5	97.00	10.50	2.00	14.00	45.60	99.50	118.00
Lake Ontario and Western	4,378	180	65.0	15.50	30.7	178.12	19.75	3.30	39.45	90.50	105.00	135.00
Entire State	50,200	136	63.5	19.00	34.5	165.55	14.10	7.00	41.00	74.50	109.00	145.00

THE SANITARY DISTRICTS into which the State is divided are as follows: *Maritime District:* Includes New York, Brooklyn, Long Island, Staten Island and Westchester county. *Hudson Valley District:* All the counties on either side of the Hudson river except Westchester, to and including Albany and Rensselaer. *Adirondack and Northern District:* The northern section of the State—the counties of Washington, Warren, Hamilton, Essex, Clinton, Franklin, St. Lawrence, Jefferson and Lewis. *Mohawk Valley District:* Schenectady, Schoharie, Saratoga, Montgomery, Fulton, Herkimer and Oneida counties. *Southern Tier District:* The seven counties along the southern border of the State. *East Central District:* Sullivan, Delaware, Otsego, Madison, Chenango, Onondaga and Cortland counties. *West Central District:* Cayuga, Tompkins, Seneca, Schuyler, Ontario, Yates, Livingston, Genesee and Wyoming counties. *Lake Ontario and Western District:* Oswego, Wayne, Monroe, Orleans, Niagara and Erie counties.

Meteorological Data; average for the State each month during 1895.

[From Records of the New York State Weather Bureau, Prof. E. A. Fuertes, Director, Ithaca, N. Y., and of the Stations in this State of the National Weather Bureau.]

STATIONS.	BAROMETER.			HUMIDITY.		TEMPERATURE						SKY.			PRECIPITATION (Inches).				WIND.	
	Mean.	Highest.	Lowest.	Mean relative.	Dew point.	Mean.	Mean for 20 years.	Highest.	Lowest.	Greatest daily range.	Least daily range.	Number clear days.	Partly cloudy.	Cloudy.	Total.	Average 20 years.	Total excess.	Total deficiency.	Prevailing direction.	Total movement.
				P.ct.	*Deg.*	*Deg.*	*Deg.*	*Deg.*	*Deg.*	*Deg.*	*Deg.*									
January	30.02	30.53	29 23	79	18	20.6	24	46	—10	35	6	7	10	14	3.07	3.24	.....	0.41	W.	8,767
February	29.99	30.89	29.18	76	13	20.0	26	44	—15	34	5	9	10	9	1.48	2.85	.....	1.10	W.	8,541
March	30.02	30.52	29.41	73	21	27.3	29	52	2	35	6	11	11	9	1.62	2.97	.....	1.19	W.	9,155
April	30.04	30.58	29.39	72	35	44.5	43	78	22	38	5	12	8	10	2.47	2 50	.....	....	N. W.	7,135
May	30.04	30.35	29.56	68	47	58.6	56	90	30	39	7	15	10	6	2.67	3 23	.....	0.61	S. W.	6,917
June	30.05	30.42	29.76	71	59	69.0	66	93	45	35	7	15	9	6	2.53	3.54	.....	1.81	S. W.	5,212
July	29 95	30.28	29.68	69	57	67.0	69	40	46	32	7	13	12	6	2.86	3.57	.....	0 90	W.	4,938
August	29.92	30.26	29.68	71	59	68.2	69	89	41	32	9	12	13	6	3.60	3.56	0.54	....	W.	5,937
September	30.04	30 40	29.67	71	54	64.5	62	92	33	35	10	15	9	6	2.32	3.20	.....	1.14	W.	6,323
October	30.03	30 55	29.56	70	36	45.0	50	69	23	33	5	13	8	10	2.10	3.27	.....	1.10	W.	8,863
November	30.16	30.61	29 37	77	34	39.3	38	69	12	33	5	9	7	13	3.82	3.29	0.75	....	S. W.	7,176
December	30.10	30.65	29.57	74	25	30.5	29	61	—1	32	5	8	9	13	3.70	3.10	0.68	....	W.	8,945
Average for the year	30.03	30.50	29.55	73	38	46.2	46	69	19	34	6	140	116	109	32.64	38.32	.....	6.00	W.	7,325

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, SHOWING TOTAL DEATHS FROM ALL CAUSES AND FROM THE PRINCIPAL ZYMOTIC DISEASES, FOR 1895.

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Albany County	167,289										
Albany	98,000	2,345	9	162	6	14	66	6	51	147	287
Cohoes	23,234	496	3	18	2	1	1	11	10	58	58
Berne	2,243	22	.....	.....	.....	.....	.....	.....	.....	1	.....
Bethlehem	3,961	63	.....	.....	.....	.....	.....	3	1	1	1
Coeymans	3,577	62	.....	3	.....	.....	.....	3	.....	2	8
Guilderland	3,563	54	1	5	.....	.....	.....	.....	.....	1	5
Knox	1,350	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Scotland	3,258	59	.....	3	.....	.....	.....	.....	.....	.....	5
Rensselaerville	2,066	19	.....	2	.....	.....	.....	.....	1	.....	1
Watervliet	7,591	58	1	1	1	2	.....	.....	3	.....	2
Westerlo	1,859	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy	12,967	270	.....	11	.....	4	.....	.....	10	27	20
Green Island	4,463	86	3	3	.....	2	.....	1	2	5	11
Allegany County	43,131										
Alfred	1,670	12	.....	.....	.....	.....	.....	.....	.....	.....	1
Allen	728	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alma	1,371	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Almond	1,413	15	.....	.....	.....	1	.....	.....	.....	.....	1
Amity	2,051	16	.....	.....	.....	.....	.....	.....	.....	1	.....
Andover	1,784	27	.....	.....	.....	.....	.....	.....	1	.....	.....
Angelica	1,558	30	.....	.....	.....	.....	.....	.....	.....	1	2
Belfast	1,467	24	.....	1	.....	.....	.....	.....	.....	1	2

Canadea	1,623	33	.....	.....	.....	.....	.....	.....	4	.....
Centerville	874	5	.....	.....	.....	.....	.....	.....	.....	.....
Clarksville	847	7	.....	.....	.....	.....	.....	.....	1	.....
Cuba	2,348	22	.....	.....	.....	.....	.....	.....	.....	.....
Friendship	2,199	17	.....	.....	.....	.....	.....	.....	.....	1
Genesee	1,107	8	.....	.....	.....	.....	.....	.....	.....	.....
Granger	909	16	.....	1	.....	.....	.....	.....	.....	.....
Grove	921	14	.....	2	.....	.....	1	.....	.....	1
Hume	1,942	26	.....	.....	.....	.....	.....	.....	.....	3
Independence	1,203	2	.....	.....	.....	.....	.....	.....	.....	.....
New Hudson	1,028	6	.....	.....	.....	.....	.....	.....	.....	1
Rushford	1,388	10	.....	.....	.....	.....	.....	.....	.....	.....
Scio	1,373	6	.....	.....	.....	.....	.....	.....	.....	1
Ward	582	2	.....	.....	.....	.....	.....	.....	.....	.....
Wellsville	5,033	41	.....	6	.....	.....	.....	.....	1	2
West Almond	642	10	.....	.....	.....	.....	.....	.....	.....	1
Willing	1,284	5	.....	.....	.....	.....	.....	.....	.....	.....
Wirt	1,157	6	.....	.....	.....	.....	.....	.....	.....	1
Broome County	62,793									
Binghamton	34,514	540	.....	13	1	.....	.....	1	25	29	55
Barker	1,133	23	.....	.....	.....	.....	.....	.....	1	2	.....
Binghamton	784	19	.....	.....	.....	.....	.....	.....	.....	.....	1
Chenango	1,438	24	.....	1	1	.....	.....	.....	.....	.....	1
Colesville	3,065	53	.....	2	.....	.....	.....	.....	1	.....	4
Conklin	1,033	18	.....	1	.....	.....	.....	.....	.....	.....	.....
Dickinson	524	41	.....	1	.....	.....	.....	.....	.....	.....	2
Fenton	1,373	19	.....	1	.....	.....	.....	.....	.....	.....	2
Kirkwood	1,134	19	.....	2	.....	.....	.....	.....	.....	.....	1
Lisle	1,927	28	.....	1	.....	.....	.....	.....	.....	1	.....
Maine	1,649	30	.....	.....	.....	.....	.....	.....	.....	.....	1
Nanticoke	698	13	.....	.....	.....	.....	.....	.....	.....	.....	1
Sanford	3,314	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Triangle	1,879	22	.....	.....	.....	.....	.....	.....	.....	.....	1
Union	3,172	64	.....	.....	.....	.....	.....	.....	5	.....	3
Vestal	2,118	35	.....	1	.....	.....	.....	.....	1	1	1
Windsor	3,017	34	.....	1	.....	.....	.....	.....	.....	.....	1

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Cattaraugus County	61,774										
Olean	7,358	120	3	4	0	.....	4	2	2	9	11
Allegany	3,715	36	.....	.....	1	.....	.....	.....	1	1	2
Ashford	1,665	14	.....	.....	.....	.....	.....	.....	.....	.....	1
Carrollton	2,098	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cold Spring	917	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Conewango	1,297	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dayton	1,744	22	.....	.....	.....	.....	1	.....	.....	1	1
East Otto	1,218	12	.....	.....	.....	.....	.....	.....	.....	1	2
Elko	492	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellicottville	1,906	27	.....	.....	.....	.....	.....	.....	.....	1	.....
Farmersville	1,029	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklinville	2,368	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Freedom	1,271	16	.....	.....	.....	.....	.....	.....	.....	.....	1
Great Valley	1,844	25	.....	.....	.....	.....	.....	.....	1	4	2
Hinsdale	1,352	13	.....	.....	.....	.....	.....	.....	.....	1	1
Humphrey	845	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ischua	808	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leon	978	18	.....	.....	.....	.....	.....	.....	.....	1	2
Little Valley	1,555	24	.....	.....	.....	.....	.....	.....	.....	1	3
Lyndon	641	6	.....	.....	.....	.....	.....	.....	.....	1	.....
Machias	1,653	25	.....	.....	.....	.....	.....	.....	.....	.....	3
Mansfield	1,001	10	.....	.....	.....	.....	1	.....	.....	2	.....
Napoli	983	8	.....	1	.....	.....	.....	.....	.....	1	.....
New Albion	1,861	32	1	.....	.....	.....	.....	.....	.....	1	5
Olean, town	4,333	50	2	.....	5	.....	.....	1	1	3	1
Otto	1,061	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perrysburgh	1,100	8	.....	.....	.....	.....	.....	.....	.....	.....	1
Persia	1,427	14	.....	.....	.....	.....	.....	.....	.....	1	4

Randolph	2,397	32	.....	1	.....	.....	.....	.....	.....	1	2
Red House	1,058	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Salamanca	3,700	47	.....	.....	.....	.....	.....	.....	.....	2	5
Salamanca	1,100	35	.....	.....	.....	.....	.....	.....	.....	.....	2
South Valley	749	5	.....	.....	.....	.....	.....	.....	.....	.....	1
Yorkshire	1,848	34	.....	1	.....	.....	1	.....	.....	2	3
Cayuga County	62,816										
Auburn	24,737	467	1	14	.....	3	.....	5	4	26	50
Aurelius	1,564	17	.....	.....	.....	.....	.....	.....	.....	.....	3
Brutus	2,810	56	.....	1	.....	.....	.....	.....	.....	1	5
Cato	1,930	24	.....	.....	.....	.....	.....	.....	.....	1	1
Conquest	1,510	17	2	.....	.....	.....	.....	.....	.....	.....	.....
Fleming	1,044	21	.....	.....	.....	.....	.....	.....	.....	1	1
Genoa	2,241	17	.....	.....	.....	.....	.....	.....	.....	.....	2
Ira	1,892	24	.....	.....	.....	.....	.....	.....	.....	.....	3
Ledyard	1,854	7	.....	1	.....	.....	.....	.....	.....	.....	2
Locke	1,005	7	.....	.....	.....	.....	.....	.....	.....	1	.....
Montezuma	994	18	.....	.....	.....	.....	.....	.....	.....	2	2
Moravia	2,502	43	.....	.....	.....	.....	.....	.....	1	1	3
Mentz	2,083	32	.....	1	.....	.....	.....	1	.....	.....	2
Niles	1,533	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Owasco	1,143	16	.....	.....	.....	.....	.....	.....	.....	.....	1
Scipio	1,785	32	.....	.....	.....	.....	.....	.....	.....	1	4
Sempronius	964	8	.....	.....	.....	.....	.....	.....	.....	.....	1
Sennett	1,310	40	.....	.....	.....	.....	.....	.....	.....	.....	1
Springport	1,905	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sterling	2,845	30	.....	.....	.....	.....	.....	.....	.....	.....	4
Summer Hill	814	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Throop	974	20	.....	.....	.....	.....	.....	.....	.....	1	2
Venice	1,616	25	.....	.....	.....	.....	.....	.....	.....	.....	5
Victory	1,682	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chautauqua County	78,900										
Dunkirk	10,040	152	.....	1	1	.....	.....	.....	17	15	18
Jamestown	18,627	228	2	4	.....	.....	.....	1	9	10	23
Arkwright	928	14	.....	.....	.....	.....	.....	.....	.....	1	.....
Busti	2,012	17	.....	.....	.....	.....	.....	.....	.....	1	.....

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Chautauqua County—(*Continued*).											
Carroll	1,790	25	.....	.....	.....	.....	.....	.....	.....	.....	2
Charlotte	1,384	32	.....	.....	.....	.....	.....	.....	.....	3	1
Chautauqua	3,133	47	.....	.....	.....	.....	.....	1	.....	2	4
Cherry Creek	1,400	22	.....	.....	.....	.....	.....	1	.....	.....	.....
Clymer	1,447	2	.....	.....	.....	.....	.....	.....	.....	.....	1
Dunkirk (T.)	.....	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellery	1,624	13	.....	.....	.....	.....	.....	.....	.....	1	.....
Ellicott	1,855	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellington	1,390	16	.....	.....	.....	.....	.....	1	.....	.....	1
French Creek	1,077	2	.....	1	.....	.....	.....	.....	.....	1	.....
Gerry	1,080	15	.....	.....	.....	.....	.....	.....	.....	2	.....
Hanover	4,888	61	.....	.....	.....	.....	.....	.....	.....	2	6
Harmony	3,120	33	.....	1	.....	.....	.....	1	.....	1	.....
Kiantone	490	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mina	1,123	18	.....	2	.....	.....	.....	.....	.....	.....	1
Poland	1,639	30	.....	.....	.....	.....	.....	1	.....	.....	1
Pomfret	2,200	32	.....	.....	.....	.....	.....	.....	2	3	1
Fredonia	3,400	53	.....	4	.....	.....	.....	.....	1	4	6
Portland	5,533	38	.....	.....	.....	.....	.....	.....	.....	1	3
Ripley	2,086	21	.....	1	.....	.....	.....	.....	.....	2	3
Sheridan	1,554	11	.....	.....	.....	.....	.....	.....	.....	.....	2
Sherman	1,489	21	.....	2	.....	.....	.....	.....	.....	.....	2
Stockton	1,730	23	.....	1	.....	.....	.....	.....	.....	1	2
Villenova	1,184	14	.....	.....	.....	.....	.....	.....	.....	.....	1
Westfield (T.)	615	13	.....	.....	.....	1	.....	.....	.....	.....	.....
Westfield	3,000	29	.....	.....	.....	.....	1	.....	.....	1	2

Chemung County	47,313										
Elmira	30,000	466	2	17	.....	1	.....	2	9	24	52
Ashland	908	11	.....	.....	.....	.....	.....	.....	.....	.....	1
Big Flats	1,738	18	.....	1	.....	.....	.....	.....	.....	.....	2
Baldwin	733	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catlin	1,186	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chemung	1,589	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elmira	788	16	.....	.....	.....	.....	.....	.....	.....	.....	1
Erin	1,216	18	.....	.....	.....	.....	.....	.....	.....	.....	1
Horseheads	3,319	54	.....	1	.....	.....	.....	.....	.....	2	6
Southport	2,096	25	.....	1	.....	.....	.....	.....	1	.....	1
Van Etten	1,864	24	.....	.....	.....	.....	.....	.....	.....	.....	2
Veteran	1,813	28	.....	.....	.....	.....	.....	.....	.....	.....	2
Chenango County	37,602										
Afton	2,088	36	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bainbridge	2,165	36	.....	.....	.....	.....	.....	.....	.....	1	3
Columbus	1,034	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coventry	1,117	14	1	1	.....	.....	.....	.....	.....	1	1
German	549	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greene	3,170	61	.....	4	.....	.....	.....	.....	1	1	2
Guilford	2,172	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lincklaen	700	10	.....	.....	.....	.....	.....	.....	.....	.....	2
McDonough	1,021	21	1	.....	.....	.....	.....	.....	.....	.....	.....
New Berlin	2,295	25	.....	.....	.....	.....	.....	.....	1	1	2
Norwich (T.)	1,672	21	.....	1	.....	.....	.....	.....	1	.....	2
Norwich	5,212	60	.....	.....	.....	.....	.....	.....	.....	6	2
North Norwich	805	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Otselic	1,243	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oxford	3,172	43	.....	.....	.....	.....	.....	.....	.....	1	2
Pharsalia	972	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pitcher	886	6	.....	.....	.....	.....	.....	.....	.....	.....	1
Preston	688	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	1,118	7	.....	.....	.....	.....	.....	.....	.....	2	.....
Sherburne	2,911	28	.....	.....	.....	.....	.....	.....	1	1	1
Smithville	1,230	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smyrna	1,356	24	.....	.....	.....	.....	.....	.....	.....	.....	3

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Clinton County	46,601										
Altona	2,250	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ausable	2,688	15	.....	.....	.....	.....	.....	.....	.....	1	1
Beekmantown	2,135	27	.....	.....	.....	.....	.....	.....	.....	1	.....
Black Brook	1,971	8	.....	.....	.....	.....	.....	.....	.....	2	1
Champlain	5,069	32	.....	1	.....	.....	1	.....	.....	1	.....
Chazy	2,981	26	.....	.....	.....	.....	.....	.....	.....	.....	3
Clinton	1,831	22	.....	.....	.....	.....	.....	.....	.....	1	.....
Dannemora	3,094	12	.....	.....	.....	.....	.....	.....	.....	.....	4
Ellenburgh	3,311	28	.....	.....	.....	.....	.....	.....	1	2	3
Mooers	3,629	37	.....	.....	.....	.....	.....	.....	.....	1	3
Plattsburgh (T.)	3,000	24	.....	.....	.....	.....	.....	.....	.....	2	1
Plattsburgh (C.)	7,010	107	.....	1	.....	.....	.....	2	4	6	21
Peru	2,313	20	.....	.....	.....	.....	.....	1	.....	.....	1
Saranac	3,725	38	.....	.....	.....	.....	.....	.....	.....	3	2
Schuyler Falls	1,562	8	.....	.....	.....	.....	.....	.....	.....	.....	1
Columbia County	45,205										
Hudson	9,633	175	3	2	.....	.....	.....	.....	3	9	24
Ancram	1,403	19	.....	1	.....	.....	.....	.....	.....	.....	1
Austerlitz	1,119	12	.....	.....	.....	.....	.....	.....	.....	1	1
Canaan	1,562	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chatham	3,880	78	.....	1	.....	1	.....	.....	7	.....	2
Claverack	4,631	75	.....	2	.....	.....	.....	.....	1	1	8
Clermont	803	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copake	1,506	19	.....	1	.....	.....	.....	.....	.....	.....	1
Gallatin	1,028	15	.....	.....	.....	.....	.....	.....	.....	.....	2
Germantown	1,689	26	.....	.....	.....	.....	.....	.....	.....	1	2
Ghent	2,654	44	.....	.....	.....	.....	.....	.....	.....	1	5
Greenport	1,224	12	.....	.....	.....	.....	.....	.....	.....	.....	3

Hilladale	1,495	13	.....	.....	.....	.....	.....	.....	.....	.....	4
Kinderhook	3,468	60	.....	"	.....	.....	.....	.....	2	4	5
Livingston	1,795	27	.....	... ..	.....	.....	.....	.....	.....	1	1
New Lebanon	1,872	28	.....	2	.....	.....	.....	.....	1	.....	1
Stockport	2,226	23	.....	.....	.....	.....	1	.....	.....	.....	3
Stuyvesant	2,110	33	.....	.....	.....	.....	.....	1	1	.....	4
Taghkanic	1,076	9	.....	.....	.....	.....	.....	.....	.....	.....	2
ortland County	28,271										
Cincinnatus	900	13	.....	.....	.....	.....	.....	.....	.....	1	1
Cortlandville	3,143	57	.....	3	.....	.....	.....	.....	.....	.....	2
Cortland	8,590	145	.....	5	.....	.....	.....	.....	3	5	20
Cuyler	1,185	11	.....	.....	.....	.....	.....	.....	.....	1	.....
Freetown	621	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harford	857	23	.....	.....	.....	.....	.....	.....	.....	2	3
Homer (T.)	1,019	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Homer	3,000	48	.....	.....	.....	.....	.....	.....	.....	1	7
Lapeer	554	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marathon	1,753	23	.....	.....	.....	.....	.....	.....	.....	.....	2
Preble	854	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scott	872	8	.....	.....	.....	.....	.....	.....	.....	.....	1
Solon	646	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Taylor	806	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Truxton	1,265	18	.....	1	.....	.....	.....	.....	.....	.....	.....
Virgil	1,430	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Willett	768	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
elaware County	45,488										
Andes	2,183	23	1	.....	.....	1	.....	.....	.....	1	1
Bovina	927	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colchester	2,992	34	.....	.....	.....	.....	.....	.....	1	1	3
Davenport	1,824	32	.....	1	.....	.....	.....	.....	.....	.....	2
Delhi	2,793	46	1	1	.....	.....	1	.....	1	1	4
Deposit	1,683	43	.....	.....	.....	.....	.....	.....	.....	2	3
Franklin	2,628	46	.....	2	.....	.....	.....	.....	.....	1	1
Hamden	1,455	24	.....	.....	.....	.....	.....	.....	.....	.....	3
Hancock	4,593	36	.....	1	.....	.....	.....	.....	.....	3	1
Harpersfield	1,336	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Kortright	1,535	19	.....	.....	.....	.....	.....	.....	.....	.....	2

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Delaware County—(*Continued*).											
Masonville	1,464	23	.....	.....	.....	.....	.....	.....	1	.....	1
Meredith	1,529	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middletown	3,503	46	.....	4	.....	.....	.....	.....	.....	2	.....
Roxbury	2,248	21	.....	3	.....	.....	.....	.....	.....	.....	.....
Sidney	3,320	61	.....	.....	.....	.....	.....	.....	.....	1	3
Stamford	1,902	44	.....	.....	.....	.....	.....	.....	.....	3	2
Tompkins	2,727	25	.....	.....	.....	.....	.....	1	1	.....	3
Walton	4,811	59	.....	2	.....	.....	.....	.....	6	4	2
Dutchess County	78,342										
Poughkeepsie	23,196	509	2	10	8	4	.....	1	18	29	47
Amenia	2,504	37	.....	.....	.....	.....	.....	.....	.....	1	3
Beekman	1,109	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clinton	1,449	26	.....	1	.....	.....	.....	.....	1	2	.....
Dover	1,768	46	.....	.....	.....	.....	.....	.....	13	1	.....
East Fishkill	2,323	20	.....	.....	.....	.....	.....	.....	.....	2	3
Fishkill	8,100	254	1	6	1	1	1	1	12	9	19
Fishkill (T.)	3,617	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hyde Park	2,808	39	.....	.....	.....	.....	.....	.....	1	.....	1
La Grange	1,463	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milan	1,062	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
North East	2,158	23	.....	.....	.....	.....	.....	.....	.....	1	1
Pawling	1,917	38	.....	1	.....	.....	.....	.....	2	2	2
Pine Plains	1,439	19	.....	1	.....	.....	.....	1	.....	.....	2
Pleasant Valley	1,554	30	.....	.....	.....	.....	.....	.....	.....	2	2
Poughkeepsie (T.)	3,807	54	.....	.....	1	.....	1	.....	1	.....	3
Red Hook	4,072	62	.....	1	.....	1	.....	.....	.....	1	2
Rhinebeck	3,344	54	.....	.....	.....	.....	.....	.....	.....	.....	2

Stanford	1,779	20	.....	.....	.....	.....	.....	.....	3	.....	1
Union Vale	1,003	14	.....	.....	.....	.....	.....	.....	1	.....	5
Wappingers	1,941	31	.....	.....	.....	.....	.....	.....	.....	1	3
Wappingers Falls	3,718	73	.....	2	3	1	.....	.....	6	1	13
Washington	2,651	67	.....	1	.....	.....	.....	.....	.....	4	2
Erie County	369,528										
Buffalo	300,000	4,668	28	98	30	22	99	38	271	604	453
Tonawanda	7,145	111	.....	2	.....	3	4	.....	7	2	13
Alden	2,377	31	.....	.....	.....	.....	.....	.....	.....	1	1
Amherst	3,960	66	.....	2	.....	.....	4	.....	.....	2	7
Amora	3,371	50	.....	1	.....	.....	.....	.....	1	1	2
Boston	1,247	22	.....	.....	.....	.....	.....	1	.....	1	.....
Brant	1,387	20	.....	1	.....	.....	.....	.....	.....	.....	.....
Cheektowaga	3,250	62	1	2	.....	.....	.....	.....	2	8	3
Clarence	3,151	46	.....	.....	.....	.....	.....	.....	1	1	4
Colden	1,384	16	.....	.....	.....	.....	.....	.....	.....	.....	1
Collins	2,203	16	.....	.....	.....	.....	.....	.....	.....	1	2
Concord	4,067	49	.....	.....	.....	.....	.....	.....	3	2	3
Eden	2,206	36	.....	1	.....	.....	1	.....	.....	.....	1
Elma	2,159	22	.....	1	.....	.....	.....	1	1	1	2
Evans	2,599	36	.....	.....	.....	.....	.....	.....	3	.....	2
East Hamburgh	2,351	43	.....	1	.....	.....	.....	.....	.....	5	1
Grand Island	1,022	14	.....	.....	.....	2	.....	.....	.....	.....	.....
Hamburgh	3,915	82	.....	1	.....	.....	.....	.....	4	4	4
Holland	1,706	23	.....	1	.....	.....	.....	.....	.....	2	5
Lancaster	4,172	108	.....	1	.....	.....	.....	.....	3	11	.....
Marilla	1,502	27	.....	.....	.....	.....	.....	.....	1	.....	2
Newstead	3,689	36	.....	.....	.....	.....	.....	.....	1	3	.....
North Collins	2,010	18	.....	1	.....	.....	.....	2	.....	1	.....
Sardinia	1,663	41	.....	1	.....	.....	.....	.....	.....	.....	3
Wales	1,229	26	.....	.....	.....	1	.....	.....	.....	2	.....
West Seneca	3,374	46	.....	.....	.....	.....	.....	.....	4	.....	5
Essex County	33,110										
Chesterfield	2,482	68	1	.....	.....	.....	.....	.....	.....	1	7
Crown Point	2,848	27	.....	.....	.....	.....	.....	.....	.....	.....	2
Elizabethtown	1,261	15	.....	.....	.....	.....	.....	.....	.....	1	5

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Essex County—(*Continued*).											
Essex	1,435	26	.....	1	.....	.....	.....	.....	.....	3	1
Jay	1,762	26	1	1	.....	.....	.....	.....	.....	.....	2
Keene	1,205	20	1	.....	.....	.....	.....	.....	1	2	2
Lewis	1,248	20	.....	.....	.....	.....	.....	.....	.....	1	1
Moriah	6,977	79	.....	1	.....	.....	.....	1	8	.....	5
Minerva	1,059	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newcomb	418	7	.....	1	.....	.....	.....	.....	.....	.....	.....
North Elba	1,216	33	.....	1	.....	.....	.....	.....	.....	1	1
North Hudson	650	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schroon	1,455	26	.....	1	.....	.....	.....	.....	.....	.....	.....
St. Armand	651	16	.....	2	.....	.....	.....	.....	.....	1	3
Ticonderoga	4,267	20	.....	1	.....	.....	.....	.....	.....	.....	1
Westport	1,827	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Wilsborough	1,642	16	.....	.....	.....	.....	.....	.....	.....	.....	1
Wilmington	668	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin County	39,817										
Altamont	1,051	31	.....	1	.....	.....	.....	.....	.....	1	2
Bangor	2,351	25	.....	.....	.....	.....	.....	.....	.....	1	2
Bellmont	2,663	19	.....	1	.....	.....	.....	.....	.....	1	1
Bombay	1,467	35	.....	.....	.....	2	.....	.....	.....	.....	7
Brandon	836	19	.....	.....	.....	.....	.....	.....	.....	1	3
Brighton	412	8	.....	.....	.....	.....	.....	.....	.....	.....	2
Burke	2,113	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chateaugay	2,777	31	.....	.....	.....	1	.....	.....	.....	2	1
Constable	1,524	30	.....	.....	.....	.....	.....	.....	1	.....	2
Dickinson	1,689	11	.....	.....	.....	.....	.....	.....	.....	.....	2
Duane	333	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

Fort Covington	2,287	33				3			1		1
Franklin	1,633	10									
Harrietstown	1,815	63							3	2	19
Malone (T.)	4,264	72		2					1	1	7
Malone	5,000	87								2	10
Moira	2,364	33							1	1	1
Santa Clara	2,022	3		1							
Waverly	1,750	30		1					1	2	3
Westville	1,356	15									
Fulton County	38,478										
Gloversville	14,694	242		8		1		1	2	15	32
Bleecker	804	9									
Broadalbin	1,930	38								1	4
Caroga	526	5									
Ephratah	1,772	11		1							2
Johnstown (T.)	3,364	49		1						1	3
Johnstown	7,768	130		2			1		2	5	21
Mayfield	2,266	42							4		2
Northampton	2,273	26				1					4
Oppenheim	1,419	9									3
Perth	688	10				1					1
Stratford	959	1									
Genesee County	33,436										
Alabama	1,679	15									1
Alexander	1,572	20								1	2
Batavia (T.)	2,597	31	1								1
Batavia	7,221	120		1	1	1	4			12	11
Bergen	1,958	21									1
Byron	1,554	24									
Bethany	1,405	33								2	1
Darien	1,928	25								1	
Elba	1,665	24									3
Le Roy (T.)	1,782	28							2	2	1
Le Roy	3,000	52		2	1		1			4	3
Oakfield	1,427	22									1
Pavilion	1,630	19		2					1		
Pembroke	2,547	34								4	2
Stafford	1,450	15								2	2

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Greene County	31,141										
Ashland	804	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Athens	2,844	34	.....	.....	.....	.....	.....	.....	.....	3	6
Cairo	2,103	52	.....	.....	1	.....	.....	.....	.....	1	6
Catskill (T.)	3,385	46	.....	.....	.....	2	.....	.....	3	.....	1
Catskill	4,920	94	1	2	.....	.....	.....	.....	9	3	3
Coxsackie	3,824	90	2	5	1	.....	.....	1	.....	5	12
Durham	1,857	36	.....	1	.....	.....	1	.....	.....	.....	1
Greenville	1,805	31	.....	1	.....	.....	.....	1	.....	.....	.....
Halcott	360	9	.....	1	.....	.....	.....	.....	.....	.....	1
Hunter	2,299	29	.....	.....	.....	2	.....	.....	3	.....	2
Jewett	1,005	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lexington	1,210	14	.....	.....	.....	.....	.....	.....	.....	2	.....
New Baltimore	2,357	52	1	3	.....	.....	.....	.....	.....	1	3
Prattsville	883	11	.....	.....	.....	.....	.....	.....	.....	.....	2
Windham	1,472	36	.....	.....	.....	.....	.....	.....	.....	.....	2
Hamilton County	5,216										
Arietta	399	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Benson	327	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hope	534	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indian Lake	1,039	11	.....	1	.....	.....	.....	.....	.....	1	1
Lake Pleasant	435	4	.....	.....	.....	.....	.....	.....	.....	.....	1
Long Lake	899	2	.....	1	.....	.....	.....	.....	.....	.....	.....
Morehouse	370	5	.....	.....	.....	1	.....	.....	.....	.....	.....
Wells	1,213	15	.....	.....	.....	.....	.....	.....	1	2	1
Herkimer County	47,491										
Columbia	1,369	22	.....	.....	.....	.....	.....	.....	.....	.....	1

Danube	1,016	14								
Fairfield	1,598	35	1							
Frankfort	4,414	74					1		2	5
German Flats	3,082	15								2
Ilion	4,057	58				1	0	1	8	9
Herkimer	5,150	98	1					3	1	14
Litchfield	1,022	4								
Little Falls (T.)		?								
Little Falls	8,783	160		12		2			7	21
Manheim	4,080	17							1	1
Newport	1,910	10								
Norway	760	8								
Ohio	831	4								
Russia	2,278	23						1	1	1
Salisbury	1,647	16								1
Schuyler	1,244	10								1
Stark	1,192	18								
Warren	1,305	15								
Wilmurt	714	6								1
Winfield	1,602	23							1	1
Jefferson County	70,358									
Watertown	16,982	331		31		6	1	2	6	14	33
Adams	3,191	51	1							2
Alexandria	3,605	49	1						2	3
Antwerp	2,908	46	2						3	4
Brownville	3,151	39		3					1	3
Cape Vincent	3,000	36							1	5
Champion	2,199	40							1	1
Clayton	4,250	33							3	3
Ellisburgh	4,223	50							3	9
Henderson	1,665	16		1				1	1	
Hounsfield	2,279	26		1					1	1
Le Ray	2,583	42		1		1		1		2
Lorraine	1,136	12								2
Lyme	2,299	25		1						4
Orleans	2,259	26								
Pamelia	925	16		2						1
Philadelphia	1,648	30								

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Jefferson County—(*Continued*).											
Rodman	1,220	7	.....	.....	.....	.....	.....	.....	.....	.....	1
Rutland	1,924	24	.....	.....	.....	.....	.....	.....	.....	2	2
Theresa	2,342	35	.....	.....	.....	.....	.....	.....	.....	.....	2
Watertown (T.)	1,083	13	.....	.....	.....	.....	.....	.....	.....	.....	1
Wilna	4,510	55	.....	7	.....	.....	.....	1	.....	2	2
Worth	933	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kings County	1,016,434										
Brooklyn	1,012,200	22,660	93	171	150	124	192	263	1,434	2,073	2,304
Flatlands	4,234	81	.....	.....	.....	.....	.....	1	2	4	4
Lewis County	30,248										
Croghan	3,800	25	.....	.....	.....	.....	.....	.....	.....	3	2
Denmark	2,127	29	.....	.....	.....	.....	.....	.....	.....	.....	1
Diana	2,506	20	.....	.....	.....	.....	.....	.....	.....	.....	1
Greig	1,411	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harrisburgh	781	6	.....	.....	.....	1	.....	.....	.....	.....	1
High Market	670	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lewis	1,087	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leyden	1,640	12	.....	.....	.....	.....	.....	.....	.....	.....	2
Lowville	3,954	73	.....	.....	.....	1	.....	.....	.....	4	7
Lyonsdale	1,422	18	.....	.....	.....	.....	.....	.....	.....	1	.....
Martinsburgh	1,032	26	.....	.....	.....	1	.....	.....	.....	1	2
Montague	923	7	.....	.....	.....	.....	.....	.....	.....	.....	1
New Bremen	2,112	24	.....	.....	.....	1	.....	.....	.....	.....	1
Osceola	569	9	.....	1	.....	.....	.....	.....	.....	.....	.....
Pinckney	998	13	.....	1	.....	.....	.....	.....	.....	.....	1

Turin	1,242	17								1
Watson	1,265	24							1	2
West Turin	1,792	23							1	1
Livingston County	37,010									
Avon	3,031	28					1			3
Caledonia	2,070	34		2					1	2
Conesus	1,180	16						2		1
Geneseo	3,245	32								1
Groveland	1,233	11		1				1	1	
Leicester	1,638	17								1
Lima	2,333	22								2
Livonia	2,947	17								4
Mount Morris	3,638	39		1						2
North Dansville	250	10						1		3
Dansville	3,758	13								1
Nunda	2,437	42						1	1	2
Ossian	925	1								
Portage	1,111	14							2	
Sparta	1,098	5								
Springwater	2,040	15								
West Sparta	959	16							1	
York	3,947	26								2
Madison County	42,206									
Brookfield	3,235	50		2					3	2
Cazenovia	3,803	64		1					3	3
De Ruyter	1,480	24								3
Eaton	2,875	66					1		4	2
Fenner	999	15							1	2
Georgetown	1,174	11								1
Hamilton	4,110	83		3		1		1	2	7
Lebanon	1,271	22							1	3
Lenox	6,872	78	1	1					1	5
Oneida	6,083	98		2					7	26
Madison	2,251	31		1						3
Nelson	1,339	25								1
Smithfield	1,015	9								

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Madison County (*Continued*).											
Stockbridge	1,704	23	.....	3	.....	.....	.....	.....	.....	.....	2
Sullivan	3,944	56	.....	.....	.....	1	.....	.....	.....	1	4
Monroe County	205,222										
Rochester	150,000	2,356	4	43	.....	4	0	15	62	173	281
Brighton	3,314	39	.....	.....	.....	.....	.....	.....	1	2	3
Chili	2,216	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clarkson	1,721	20	.....	.....	.....	.....	.....	.....	.....	1	2
Gates	3,103	36	.....	.....	.....	.....	.....	.....	1	5	1
Greece	5,063	47	1	1	.....	.....	.....	.....	5	.....	2
Hamlin	2,364	21	.....	1	.....	.....	.....	.....	1	.....	1
Henrietta	2,141	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irondequoit	2,363	27	.....	.....	.....	.....	.....	.....	2	3	4
Mendon	3,067	58	.....	.....	.....	.....	.....	.....	.....	.....	7
Ogden	2,572	32	.....	.....	.....	.....	.....	.....	1	2	1
Parma	2,796	43	.....	1	.....	.....	.....	.....	.....	.....	1
Penfield	2,831	33	.....	.....	.....	.....	.....	.....	.....	1	2
Perinton	4,672	65	.....	.....	.....	.....	.....	.....	.....	.....	2
Pittsford	2,134	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Riga	1,933	21	.....	.....	.....	.....	.....	.....	.....	1	2
Rush	1,656	31	.....	.....	.....	.....	.....	.....	.....	1	1
Sweden	1,240	17	.....	.....	.....	.....	.....	.....	.....	.....	3
Brockport	3,742	53	.....	.....	.....	.....	.....	.....	.....	4	9
Webster	3,045	48	.....	.....	.....	.....	.....	1	1	2	2
Wheatland	2,400	36	.....	1	.....	.....	.....	.....	.....	1	2
Montgomery County	46,081										
Amsterdam	18,542	225	.....	7	.....	3	.....	2	5	23	33

Amsterdam (T.)	3,003	31	.....	1	.....	.....	.....	.....	.....	2	3
Canajoharie	4,227	27	.....	1	.....	.....	.....	.....	.....	.....	3
Charleston	1,119	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Florida	2,146	22	.....	2	.....	.....	.....	.....	.....	.....	2
Glen	2,550	36	.....	.....	.....	.....	1	.....	.....	3	1
Minden	1,973	28	.....	.....	.....	.....	.....	.....	.....	2	2
Fort Plain	3,000	46	.....	2	.....	.....	.....	.....	.....	1	2
Mohawk	2,803	71	.....	.....	.....	.....	.....	.....	1	1	5
Palatine	2,413	12	.....	1	.....	.....	.....	.....	.....	.....	2
Root	1,962	11	.....	1	.....	.....	.....	.....	.....	.....	1
St. Johnsville	2,300	33	.....	1	.....	.....	.....	.....	.....	1	1
New York County	1,925,562										
New York	1,925,562	43,322	227	322	85	508	793	496	1976	3208	5105
Niagara County	64,378										
Lockport	16,088	295	2	4	2	.....	2	1	7	17	29
Niagara Falls	16,000	244	4	18	.....	2	2	1	11	18	20
Cambria	1,888	27	.....	.....	1	.....	.....	.....	.....	.....	2
Hartland	2,784	37	.....	.....	1	.....	1	.....	.....	.....	5
Lewiston	2,329	55	.....	.....	.....	.....	.....	.....	.....	1	1
Lockport (T.)	2,470	17	.....	1	.....	.....	.....	.....	.....	.....	.....
Newfane	3,122	37	.....	.....	.....	.....	.....	.....	.....	.....	3
Niagara	.....	14	.....	1	.....	.....	.....	.....	.....	1	.....
Pendleton	1,489	15	.....	1	.....	.....	.....	.....	.....	.....	1
Porter	2,080	19	.....	.....	.....	.....	.....	.....	.....	.....	3
Royalton	4,768	49	.....	2	.....	.....	.....	.....	.....	.....	4
Somerset	1,857	20	.....	.....	.....	.....	.....	.....	.....	2	1
Wheatfield	5,117	15	.....	.....	.....	.....	1	.....	.....	.....	1
North Tonawanda	4,800	141	1	10	.....	2	2	.....	10	18	3
Wilson	2,861	36	.....	.....	.....	.....	.....	.....	.....	1	2
Oneida County	123,756										
Utica	46,608	831	.....	8	3	3	.....	2	18	49	91
Rome (T.)	13,638	13	.....	.....	.....	.....	.....	.....	.....	1	.....
Annsville	1,963	23	1	.....	.....	.....	.....	.....	.....	3	2
Augusta	1,983	34	1	.....	.....	.....	.....	.....	.....	.....	.....
Ava	828	6	.....	.....	.....	.....	.....	.....	.....	.....	.....

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Oneida County—(*Continued*).											
Booneville	3,512	41	1	1	.....	.....	.....	.....	1	0	2
Bridgewater	1,053	27	.....	.....	.....	1	.....	.....	.....	.....	2
Camden	3,675	77	.....	1	.....	.....	.....	.....	.....	8	5
Deerfield	1,611	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Florence	1,415	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Floyd	842	10	.....	.....	.....	.....	.....	.....	.....	.....	1
Forestport	1,604	35	.....	1	.....	.....	.....	2	.....	3	2
Kirkland	4,636	34	.....	.....	.....	.....	.....	.....	.....	.....	3
Lee	1,900	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marcy	1,458	17	.....	.....	.....	.....	.....	.....	.....	.....	1
Marshall	2,069	19	.....	1	.....	.....	.....	.....	.....	.....	1
New Hartford	4,935	69	.....	.....	.....	1	.....	.....	.....	.....	7
Paris	3,166	39	.....	1	.....	.....	.....	.....	.....	2	2
Remsen	1,233	18	.....	.....	.....	.....	.....	.....	.....	.....	2
Sangerfield	2,836	25	.....	.....	.....	.....	.....	.....	.....	.....	2
Steuben	946	15	.....	.....	.....	.....	.....	.....	.....	1	1
Trenton	2,629	51	.....	.....	.....	.....	.....	.....	1	.....	3
Vernon	2,937	44	.....	.....	.....	.....	.....	.....	.....	.....	1
Verona	4,532	26	.....	.....	.....	.....	.....	.....	.....	.....	4
Vienna	2,303	22	.....	.....	.....	1	.....	.....	.....	.....	.....
Western	1,773	18	.....	1	.....	.....	.....	.....	.....	.....	.....
Westmoreland	2,333	38	.....	.....	.....	.....	.....	.....	4	2	1
Whitestown	5,225	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Onondaga County	150,808										
Syracuse	91,944	1,539	9	29	7	24	1	14	21	94	172
Camillus	2,522	47	.....	2	.....	.....	.....	.....	1	.....	1
Cicero	2,553	29	.....	.....	.....	.....	.....	.....	.....	1	1

Clay	2,498	29								2
Dewitt	5,182	81		1	2	1		1	5	9
Elbridge	3,808	48							2	3
Fabius	1,776	31	1					1	2	1
Geddes	1,783	40		1				2	4	2
LaFayette	1,702	24						1		1
Lysander	3,179	47					1		1	5
Baldwinsville	3,040	10								
Manlius	5,518	84		1			1		3	8
Marcellus	2,644	48		1				1		6
Onondaga	5,011	110				1			1	5
Otisco	1,311	8								
Pompey	2,771	47						1	1	1
Salina	3,493	61	1			2		1	2	6
Skaneateles	4,994	64		2					1	4
Spofford	1,210	16								
Tully	1,378	14							3	
Van Buren	2,368	27		1				2		1
ntario County	48,718									
Bristol	1,451	29					1		1	4
Canadice	677	7								1
Canandaigua (T.)	2,121	28							1	3
Canandaigua	5,868	102		1					2	8
East Bloomfield	2,063	30							2	2
Farrington	1,686	17		1						2
Geneva (T.)	2,402	15								1
Geneva	7,557	151		1	1		1	1	13	18
Gorham	2,188	18								
Hopewell	1,540	26								2
Manchester	4,181	74		1					3	7
Naples	2,377	20		1						1
Phelps	5,150	79		6			1	1	1	11
Richmond	1,450	15							1	1
Seneca	2,687	34	1						2	3
South Bristol	1,180	17								
Victor	2,605	31							2	5
West Bloomfield	1,435	25		1						3

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.— (*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Orange County	97,760										
Newburgh	24,536	442	1	7	.....	1	.....	11	9	37	59
Middletown	11,612	235	1	4	.....	.....	1	1	11	17	28
Blooming Grove	2,264	23	.....	.....	.....	.....	.....	.....	.....	1	.....
Chester	2,207	44	.....	.....	.....	.....	.....	1	.....	4	3
Cornwall	3,827	40	.....	2	.....	.....	.....	1	.....	1	2
Crawford	1,766	25	.....	.....	.....	.....	.....	.....	1	1	1
Deerpark	3,031	40	.....	.....	.....	.....	.....	1	1	1	2
Port Jervis	9,327	162	.....	7	1	.....	1	1	9	11	16
Goshen	4,646	111	.....	.....	1	1	.....	.....	.....	3	17
Greenville	797	13	.....	.....	.....	.....	.....	.....	.....	1	1
Hamptonburgh	1,105	21	.....	.....	.....	.....	.....	.....	.....	.....	2
Highlands	3,406	36	.....	1	.....	.....	.....	.....	1	2	3
Minisink	1,277	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monroe	1,701	36	.....	.....	.....	.....	.....	.....	1	3	2
Montgomery	5,259	84	.....	.....	1	.....	.....	.....	1	9	7
Mount Hope	1,360	18	.....	.....	.....	.....	.....	.....	.....	4	.....
Newburgh	3,752	42	.....	.....	.....	.....	.....	.....	.....	1	1
New Windsor	2,191	35	.....	.....	.....	.....	.....	.....	.....	1	.....
Tuxedo	1,813	22	.....	.....	.....	.....	.....	.....	.....	2	.....
Wallkill	2,727	46	.....	.....	.....	.....	.....	.....	.....	1	2
Warwick	5,984	94	1	.....	.....	.....	.....	.....	1	1	12
Wawayanda	1,554	26	.....	.....	.....	.....	.....	.....	.....	1	1
Woodbury	1,554	23	.....	.....	.....	.....	.....	.....	.....	4	2
Orleans County	30,762										
Albion	4,586	78	1	.....	.....	.....	.....	.....	.....	6	6
Albion (T.)	1,311	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barre	2,099	25	.....	.....	.....	.....	.....	.....	.....	.....	1

Gaines	1,953	24	.....	.....	.....	.....	.....	.....	.....	3
Kendall	1,681	31	.....	.....	.....	.....	.....	.....	.....	2
Murray	3,527	76	.....	2	.....	.....	.....	.....	1	4
Ridgeway	2,902	42	.....	2	.....	.....	.....	.....	2	5
Medina	4,492	61	.....	1	1	.....	.....	1	0	4
Shelby	2,100	31	.....	.....	.....	.....	.....	.....	.....	3
Yates	1,995	18	.....	2	.....	.....	1	.....	.....	1
Oswego County	70,970									
Oswego	21,966	334	.....	1	1	1	.....	7	35	59
Albion	2,071	37	.....	.....	.....	.....	.....	.....	.....	5
Amboy	985	10	.....	.....	.....	.....	.....	.....	.....	2
Boylston	1,115	15	.....	.....	.....	.....	.....	.....	.....	2
Constantia	2,604	8	.....	.....	.....	.....	.....	.....	.....	.....
Granby	4,226	72	.....	.....	.....	.....	.....	2	3	7
Hannibal	2,719	34	.....	.....	.....	.....	.....	.....	1	1
Hastings	2,448	41	.....	.....	.....	.....	.....	.....	.....	12
Mexico	2,242	58	.....	1	.....	.....	.....	.....	.....	6
New Haven	1,520	23	.....	.....	.....	.....	.....	1	.....	3
Orwell	1,297	16	.....	.....	.....	.....	.....	.....	.....	.....
Oswego (T.)	2,755	46	.....	.....	.....	.....	.....	1	5	1	3
Palermo	1,615	17	.....	.....	.....	.....	.....	.....	.....	.....
Parish	1,839	39	.....	1	.....	.....	.....	.....	2	2
Redfield	1,084	13	.....	.....	.....	.....	.....	.....	.....	.....
Richland	3,637	37	1	.....	1	.....	.....	.....	.....	2
Sandy Creek	2,342	30	.....	.....	1	.....	.....	.....	.....	2
Schroeppel	3,101	57	.....	3	.....	.....	.....	.....	2	3
Scriba	2,507	36	.....	.....	2	.....	.....	2	1	4
Volney	2,300	30	.....	1	.....	.....	.....	.....	1	3
Fulton	4,214	23	1	.....	.....	.....	.....	.....	.....	3
West Monroe	1,056	6	.....	.....	.....	.....	.....	.....	.....	.....
Williamstown	1,236	17	.....	.....	.....	.....	.....	.....	.....	.....
Otsego County	50,361									
Burlington	1,402	18	.....	.....	.....	.....	.....	.....	.....	.....
Butternuts	1,777	27	.....	1	.....	.....	.....	.....	.....	1
Cherry Valley	1,772	20	.....	1	.....	.....	.....	1	.....	.....

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Otsego County—(*Continued*).											
Decatur	588	12	.....	.....	.....	.....	.....	.....	1	.....	.....
Edmeston	1,689	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exeter	1,227	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hartwick	1,866	45	.....	.....	.....	.....	.....	.....	.....	1	2
Laurens	1,663	30	.....	.....	.....	.....	.....	.....	.....	.....	1
Maryland	2,166	34	.....	1	.....	.....	.....	.....	.....	.....	.....
Middlefield	2,223	43	1	.....	.....	.....	.....	.....	.....	1	4
Milford	2,109	36	.....	.....	.....	.....	.....	.....	.....	1	1
Morris	1,848	28	.....	.....	.....	.....	.....	1	.....	1	2
New Lisbon	1,312	22	.....	.....	.....	.....	.....	.....	.....	.....	1
Oneonta (T.)	1,571	37	.....	.....	.....	.....	.....	.....	.....	1	2
Oneonta	6,776	103	.....	5	.....	.....	.....	.....	5	2	12
Otego	1,806	22	.....	1	.....	.....	.....	.....	.....	1	1
Otsego	1,653	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooperstown	2,657	42	.....	.....	.....	1	.....	.....	.....	1	4
Pittsfield	1,186	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plainfield	961	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Richfield	2,663	43	.....	1	.....	.....	.....	.....	.....	1	2
Roseboom	1,233	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Springfield	1,790	33	.....	1	.....	.....	.....	.....	1	.....	1
Unadilla	2,714	59	.....	.....	.....	.....	.....	.....	.....	.....	3
Westford	998	14	.....	.....	.....	.....	.....	.....	.....	1	.....
Worcester	2,670	39	.....	.....	.....	.....	.....	.....	.....	1	3
Putnam County	14,230										
Carmel	2,984	50	.....	.....	.....	.....	.....	1	2	3	5
Kent	1,177	25	.....	.....	.....	.....	.....	.....	.....	.....	1
Patterson	1,415	23	.....	.....	.....	.....	.....	.....	3	1	2

Phillipstown	3,815	53	.....	.....	.....	.....	.....	.....	2	1	5
Putnam Valley	1,221	18	.....	1	.....	.....	.....	.....	1	.....	.....
South East	3,540	53	.....	.....	.....	.....	.....	.....	2	.....	3
Queens County	141,805										
Long Island City	35,745	837	.....	12	4	3	12	9	40	86	62
Flushing	20,816	418	2	6	2	1	3	1	21	24	47
Hempstead	23,991	530	1	4	1	2	.....	1	11	44	38
Jamaica	17,654	448	1	2	1	4	2	.....	32	53	40
Newtown	19,776	578	2	3	9	1	4	10	64	69	48
North Hempstead	8,726	120	.....	.....	.....	1	.....	.....	5	7	13
Oyster Bay	14,887	243	.....	1	1	.....	.....	.....	3	10	21
Rensselaer County	128,923										
Troy	64,986	1,307	10	38	1	19	17	6	50	80	163
Berlin	1,803	18	.....	1	.....	1	.....	1	1	.....	1
Brunswick	3,684	45	1	1	.....	1	1	.....	.....	4	.....
East Greenbush	2,126	41	.....	.....	.....	.....	.....	.....	.....	1	4
Grafton	1,414	21	.....	.....	.....	.....	.....	.....	3	1	3
Greenbush	7,462	163	1	6	.....	.....	5	.....	2	7	11
Hoosick	3,400	37	.....	2	.....	.....	.....	.....	1	.....	2
Hoosick Falls	7,014	77	3	1	.....	.....	.....	.....	.....	1	14
Lansingburgh (T.)	500	5	.....	.....	.....	.....	.....	.....	1	.....	.....
Lansingburgh	10,550	239	.....	5	.....	3	.....	3	11	20	31
Nassau	2,209	43	.....	.....	.....	1	.....	.....	.....	.....	1
North Greenbush	4,794	78	.....	.....	.....	.....	1	.....	3	1	5
Petersburgh	1,584	17	.....	2	.....	.....	.....	.....	.....	.....	1
Pittstown	4,036	58	.....	1	.....	.....	.....	.....	.....	2	4
Poestenkill	1,502	28	.....	1	.....	.....	.....	.....	.....	.....	3
Sand Lake	2,474	39	1	2	.....	.....	.....	.....	1	.....	3
Schaghticoke	2,973	33	.....	.....	.....	1	.....	.....	1	.....	2
Schodack	4,514	70	.....	3	.....	.....	.....	.....	1	4	3
Stephentown	1,799	28	.....	.....	.....	.....	.....	.....	1	.....	1
Richmond County	53,452										
New Brighton	17,261	350	1	10	.....	6	.....	6	7	25	30
Middletown	1,870	19	.....	.....	.....	.....	.....	.....	.....	3	.....
Edgewater	15,000	291	.....	.....	3	1	1	1	17	24	26
Northfield	3,500	85	.....	.....	.....	.....	.....	.....	3	7	14

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Richmond County—(*Continued*).											
Port Richmond	6,400	123	.....	1	1	.....	6	3	1	13	16
Southfield	1,045	59	.....	.....	.....	2	.....	1	1	11	1
Westfield	8,648	106	1	.....	.....	.....	.....	1	3	6	16
Rockland County	33,726										
Clarkstown	5,552	84	.....	.....	.....	.....	.....	.....	2	3	5
Haverstraw	7,714	119	.....	2	.....	2	.....	2	3	9	6
Orangetown	4,570	98	1	.....	.....	.....	.....	.....	1	5	8
Nyack	5,603	90	1	.....	.....	1	2	4	6	8	7
Ramapo	6,599	125	1	5	.....	0	.....	3	7	9	17
Stony Point	3,656	77	.....	.....	.....	3	.....	.....	2	3	8
St. Lawrence County	86,254										
Ogdensburgh	11,959	226	1	6	.....	.....	.....	1	1	32	26
Brasher	2,927	16	.....	1	.....	.....	.....	.....	.....	.....	2
Canton	6,013	82	.....	.....	.....	1	.....	.....	.....	.....	11
Clare	332	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clifton	855	15	.....	.....	.....	1	.....	.....	.....	2	.....
Colton	1,860	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
De Kalb	2,777	46	1	.....	.....	.....	.....	.....	1	1	5
De Peyster	974	19	.....	.....	.....	.....	.....	.....	.....	1	.....
Edwards	1,471	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fine	1,337	18	.....	1	.....	.....	.....	.....	.....	1	.....
Fowler	1,750	18	.....	.....	.....	.....	.....	.....	.....	1	2
Gouverneur	5,921	88	1	2	.....	1	.....	.....	2	4	10
Hammond	1,669	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hermon	1,509	20	.....	1	.....	.....	.....	.....	.....	1	3
Hopkinton	1,933	30	.....	.....	.....	.....	.....	.....	.....	.....	3

Lawrence	2,172	33	.....	1	.....	.....	.....	.....	.....	3
Lisbon	3,693	29	.....	1	.....	.....	.....	.....	.....	2
Louisville	1,697	20	.....	.....	.....	.....	.....	.....	.....	.....
Mascomb	1,457	20	.....	1	.....	.....	.....	.....	.....	.....
Madrid	1,854	23	.....	1	.....	.....	.....	.....	2	1
Massena	2,776	50	.....	2	.....	2	.....	2	2	1
Morristown	1,935	19	.....	.....	.....	.....	.....	1	1	1
Norfolk	1,947	23	1	.....	.....	.....	.....	.....	2	2
Oswegatchie	2,433	31	.....	.....	.....	.....	1	.....	3	2
Parishville	2,268	42	.....	2	.....	1	.....	.....	.....	5
Pierrepont	1,953	21	.....	.....	.....	.....	.....	.....	.....	.....
Pitcairn	1,220	7	.....	.....	.....	.....	.....	.....	.....	.....
Potsdam (T.)	4,860	56	.....	.....	.....	1	.....	.....	6	6
Potsdam	4,000	64	.....	.....	.....	.....	.....	2	4	5
Rossie	1,345	2	.....	.....	.....	.....	.....	.....	.....	.....
Russell	2,077	25	.....	.....	.....	.....	.....	1	.....	2
Stockholm	3,122	40	2	.....	.....	.....	.....	.....	1	3
Waddington	2,125	31	.....	1	.....	.....	.....	.....	1	2
ıratoga County	57,301									
Ballston Spa	3,527	56	.....	2	.....	.....	.....	.....	4	3
Ballston	1,551	19	.....	1	.....	.....	.....	.....	.....	1
Charlton	1,121	18	.....	.....	.....	.....	.....	.....	1	1
Clifton Park	2,215	46	.....	1	.....	.....	.....	2	1	6
Corinth	2,370	44	.....	4	3	.....	.....	.....	1	4
Edinburgh	1,283	21	.....	.....	.....	.....	.....	.....	.....	1
Day	886	6	.....	.....	.....	.....	.....	.....	.....	1
Galway	1,520	32	.....	.....	.....	.....	.....	.....	.....	3
Greenfield	2,066	30	.....	.....	.....	.....	.....	.....	.....	5
Hadley	1,115	16	1	1	.....	.....	.....	.....	.....	1
Half Moon	2,515	24	.....	.....	.....	.....	.....	.....	1	2
Malta	1,161	18	.....	.....	.....	.....	.....	.....	.....	.....
Mechanicville	3,000	73	.....	.....	.....	.....	1	1	8	6
Melton	2,680	98	.....	.....	.....	.....	1	.....	4	8
Moreau	2,728	47	.....	.....	.....	.....	.....	3	.....	4
Northumberland	1,420	17	.....	.....	.....	.....	.....	.....	.....	1
Providence	820	9	.....	.....	.....	.....	.....	.....	1	1
Saratoga	3,980	60	.....	.....	.....	.....	.....	.....	1	5

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Saratoga County—(*Continued*).											
Saratoga Springs (T.)	500	14	.....	1	.....	.....	.....	.....	.....	.....	.....
Saratoga Springs	12,000	272	1	6	.....	5	.....	6	3	11	37
Stillwater	2,258	38	.....	.....	.....	.....	.....	.....	.....	2	8
Waterford	5,522	132	.....	3	.....	2	.....	.....	4	6	16
Wilton	983	13	.....	.....	.....	.....	.....	.....	.....	1	1
Schenectady County	34,194										
Schenectady	22,858	438	4	14	.....	1	.....	6	2	41	59
Duanesburgh	2,581	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Glenville	2,510	34	.....	2	.....	1	.....	.....	.....	.....	2
Niskayuna	1,062	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Princetown	695	16	.....	.....	.....	.....	.....	.....	.....	.....	2
Rotterdam	4,488	83	.....	2	.....	1	.....	2	1	2	.....
Schoharie County	28,815										
Blenheim	942	20	.....	1	.....	.....	.....	.....	.....	1	3
Broome	1,397	38	.....	.....	.....	.....	.....	.....	.....	1	4
Carlisle	1,387	19	.....	.....	.....	.....	.....	.....	.....	.....	1
Cobleskill	3,436	54	.....	1	1	.....	.....	1	.....	2	8
Conesville	910	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Esperance	1,175	20	.....	.....	.....	.....	.....	.....	.....	.....	1
Fulton	2,354	23	1	.....	.....	.....	.....	.....	.....	.....	3
Gilboa	1,707	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	1,496	26	.....	2	.....	.....	.....	.....	.....	.....	.....
Middleburgh	3,005	44	.....	1	.....	.....	.....	2	.....	3	5
Richmondville	1,840	29	.....	1	.....	.....	.....	.....	.....	1	3
Schoharie	2,803	37	.....	1	.....	.....	.....	.....	.....	.....	2
Seward	1,637	21	.....	1	.....	.....	.....	.....	.....	2	3

Sharon	2,078	33	.....	.....	.....	.....	.....	.....	1	.....
Summit	1,332	21	.....	.....	.....	.....	.....	.....	.....	1
Wright	1,302	11	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler County	16,861									
Catherine	1,333	14	.....	.....	.....	.....	.....	.....	.....	.....
Cayuta	551	5	.....	1	.....	.....	.....	.....	.....	.....
Dix	3,710	63	.....	2	.....	.....	.....	.....	2	2
Hector	4,832	58	1	1	.....	.....	.....	.....	3	2
Montour	1,941	23	.....	.....	.....	.....	.....	.....	.....	.....
Orange	1,460	23	.....	.....	.....	.....	.....	.....	.....	2
Reading	1,378	9	.....	.....	.....	1	.....	.....	.....	.....
Tyrone	1,635	6	.....	.....	.....	.....	.....	.....	.....	.....
Seneca County	26,542									
Covert	1,865	32	.....	.....	.....	.....	.....	.....	1	1
Fayette	2,378	18	1	.....	.....	.....	.....	.....	.....	1
Junius	1,108	13	.....	.....	.....	.....	.....	.....	.....	.....
Lodi	1,666	30	.....	.....	.....	.....	.....	.....	3	.....
Ovid	2,291	37	.....	.....	.....	.....	.....	.....	2	2
Romulus	2,181	27	.....	.....	.....	.....	.....	.....	.....	2
Seneca Falls (T.)	850	7	.....	1	.....	1	.....	.....	.....	1
Seneca Falls	6,500	118	.....	1	2	.....	1	2	10	17
Tyre	955	16	.....	.....	.....	.....	.....	2	.....	2
Varick	1,379	22	.....	1	.....	.....	.....	.....	1	1
Waterloo (T.)	1,000	10	.....	.....	.....	.....	.....	.....	.....	.....
Waterloo	4,350	78	.....	2	.....	.....	.....	2	5	8
Steuben County	82,468									
Corning	10,025	140	1	8	3	.....	5	.....	11	10
Hornellsville	11,898	155	.....	4	1	.....	1	3	12	10
Addison	2,813	31	.....	.....	.....	.....	2	.....	.....	1
Avoca	2,236	14	.....	.....	.....	.....	.....	.....	.....	2
Bath (T.)	3,800	65	.....	.....	.....	.....	.....	1	.....	2
Bath	3,261	53	.....	1	.....	.....	.....	.....	2	4
Bradford	774	9	.....	.....	.....	.....	.....	.....	.....	.....
Cameron	1,455	10	.....	.....	.....	.....	.....	.....	.....	.....
Campbell	1,539	12	.....	.....	.....	.....	.....	.....	.....	.....

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Steuben County—(*Continued*).											
Canisteo	3,593	39	.....	1	.....	.....	.....	.....	.....	.....	1
Caton	1,388	4	.....	.....	.....	.....	.....	.....	.....	.....	1
Cohocton	3,428	22	.....	.....	.....	.....	.....	.....	.....	1	2
Corning (T.)	1,838	13	1	1	.....	.....	1	.....	.....	.....	1
Dansville	1,544	13	.....	.....	.....	.....	.....	.....	.....	.....	1
Erwin	1,843	25	.....	1	.....	.....	.....	.....	.....	.....	1
Fremont	1,088	18	.....	1	.....	1	.....	.....	.....	.....	.....
Greenwood	1,241	17	.....	.....	.....	.....	.....	.....	.....	.....	1
Hartsville	782	2	.....	1	.....	.....	.....	.....	.....	.....	.....
Hornby	1,030	9	.....	.....	.....	.....	.....	.....	.....	.....	2
Hornellsville (T.)	1,806	19	.....	1	.....	.....	.....	.....	.....	.....	.....
Howard	1,885	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jasper	1,689	18	.....	.....	.....	.....	.....	.....	.....	.....	2
Lindley	1,455	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Prattsburgh	2,149	28	.....	.....	.....	.....	.....	.....	.....	.....	2
Pulteney	1,693	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rathbone	1,226	8	.....	.....	.....	.....	.....	.....	1	.....	.....
Thurston	1,084	13	.....	.....	.....	.....	.....	.....	.....	1	1
Troupsburgh	2,171	22	.....	.....	.....	.....	.....	.....	.....	2	1
Tuscarora	1,393	7	.....	.....	.....	1	.....	.....	.....	.....	.....
Urbana	2,542	42	.....	.....	.....	1	.....	.....	1	1	.....
Wayne	830	8	.....	.....	.....	1	.....	.....	.....	.....	2
Wayland	2,375	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Union	1,150	7	.....	.....	.....	.....	.....	.....	3	.....	.....
Wheeler	1,326	17	.....	.....	.....	.....	.....	.....	.....	.....	1
Woodhull	2,084	23	.....	.....	.....	.....	.....	.....	2	.....	1

East Hampton	2,969	22	.....	.....	.....	.....	.....	.....	.....	.....	3
Huntington	8,253	148	.....	1	1	2	.....	2	.....	8	14
Islip	9,211	185	.....	4	.....	.....	.....	.....	6	11	18
Riverhead	4,196	56	.....	1	.....	.....	.....	.....	.....	5	4
Shelter Island	907	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smithtown	2,674	143	.....	5	.....	.....	.....	.....	1	3	25
South Hampton	5,041	96	.....	3	.....	.....	.....	.....	1	.....	6
Sag Harbor	3,000	61	.....	1	.....	.....	.....	5	1	7	1
Southold	7,671	127	.....	3	3	1	.....	2	2	3	10
Sullivan County	31,860										
Bethel	2,227	24	.....	.....	.....	.....	.....	.....	.....	.....	2
Callicoon	2,041	48	.....	.....	.....	.....	.....	.....	2	2	1
Cochecton	1,175	10	.....	.....	.....	.....	.....	.....	.....	.....	1
Delaware	1,765	13	.....	1	.....	.....	.....	.....	.....	1	1
Fallsburgh	2,964	31	.....	.....	.....	.....	.....	.....	1	1	1
Forestburgh	679	11	.....	.....	.....	.....	.....	.....	.....	1	2
Fremont	2,223	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Highlands	1,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1
Liberty	3,471	61	1	.....	1	.....	1	.....	.....	3	15
Lumberland	878	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mamakating	3,504	70	.....	.....	.....	.....	.....	.....	.....	5	5
Neversink	2,079	21	.....	.....	.....	.....	.....	.....	.....	2	2
Rockland	3,315	48	.....	1	.....	.....	.....	.....	7	.....	2
Thompson	3,428	42	1	.....	.....	.....	.....	.....	.....	1	4
Tusten	1,012	9	.....	1	.....	.....	1	.....	1	.....	2
Tioga County	29,675										
Waverly	4,123	59	.....	1	.....	.....	.....	1	3	4	4
Barton	2,372	26	.....	.....	.....	.....	.....	.....	.....	.....	1
Berkshire	1,157	20	.....	1	.....	.....	.....	.....	.....	.....	.....
Candor	3,525	61	.....	3	.....	.....	.....	1	3	1	3
Newark Valley	2,296	31	.....	1	.....	.....	.....	.....	.....	2	4
Nichols	1,635	24	.....	.....	.....	.....	.....	.....	.....	.....	1
Owego (T.)	2,762	28	.....	2	.....	.....	.....	.....	.....	.....	.....

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Tioga County—(*Continued*).											
Owego	6,000	84	1	.....	.....	.....	.....	.....	.....	1	3
Richford	1,252	36	.....	1	.....	.....	.....	.....	.....	1	.....
Spencer	2,144	30	.....	1	.....	.....	.....	.....	.....	.....	4
Tioga	2,373	30	.....	2	.....	.....	1	.....	.....	2	2
Tompkins County	33,612										
Ithaca	13,460	139	.....	1	.....	.....	.....	.....	2	8	12
Carolina	2,035	28	.....	.....	.....	.....	.....	1	.....	.....	.....
Danby	1,676	19	.....	1	.....	.....	.....	.....	.....	.....	2
Dryden	3,912	62	.....	.....	.....	.....	.....	.....	.....	.....	1
Enfield	1,332	25	.....	.....	.....	.....	.....	.....	.....	1	2
Groton	3,607	50	.....	.....	.....	.....	.....	.....	.....	.....	5
Ithaca (T.)	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lansing	2,488	21	.....	.....	.....	.....	.....	.....	.....	.....	1
Newfield	2,195	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ulysses	2,868	38	.....	.....	.....	.....	.....	.....	1	0	3
Ulster County	87,652										
Kingston	21,495	425	8	2	7	2	0	8	4	40	46
Denning	894	11	.....	.....	.....	.....	.....	.....	.....	1	.....
Esopus	5,035	76	.....	1	.....	.....	.....	3	.....	5	8
Gardiner	1,788	30	1	1	.....	.....	.....	.....	.....	.....	1
Hardenburgh	744	3	.....	.....	.....	.....	.....	.....	.....	.....	1
Hurley	2,266	41	.....	.....	.....	.....	.....	.....	1	2	10
Kingston	662	22	.....	.....	.....	.....	.....	.....	.....	.....	.....

Lloyd	2,502	51		2				1	3	3
Marbletown	3,689									
Marlborough	3,521	56						2	2	7
New Paltz	2,112	62		2				1		4
Olive	2,688	29							1	
Plattekill	1,955	22					1	1	1	3
Rochester	3,487	50					3		2	3
Rosendale	6,125	105		4	3	2	4	2	5	4
Saugerties	6,035	97		2		1			3	7
Saugerties	4,235	84	1				5	1	9	13
Shandaken	3,142	62		3		1		2	4	2
Shawangunk	2,505	33							2	1
Ulster	3,096	14							1	1
Wawarsing	4,866	81		2		1	1	2		6
Ellenville	3,000	57		4				2	5	8
Woodstock	1,676	27		1					2	4
Warren County	28,618									
Bolton	1,376	22								5
Caldwell	1,376	14								2
Chester	2,247	12								1
Hague	767	6								
Horicon	1,534	8								1
Johnsburgh	2,886	13								
Luzerne	1,592	24								4
Queensbury	2,600	23							1	1
Glens Falls	10,000	193	2	2	1		3	13	16	19
Stony Creek	1,276	18					2			2
Thurman	1,071	9								1
Warrensburgh	1,831	31							1	1
Washington County	46,458									
Argyle	2,193	27				1			1	1
Cambridge	2,067	65					1		1	5
Dresden	623	9	1							

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Continued*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria.	Diarrhœa.	Consumption.
Washington County (*Continued*).											
Easton	2,451	37	1	.....	.....	.....	.....	.....	.....	.....	1
Fort Ann	2,711	35	.....	.....	.....	.....	.....	.....	.....	.....	3
Fort Edward	4,382	79	.....	.....	.....	.....	1	2	3	3	10
Granville	5,281	58	.....	1	.....	3	.....	.....	1	.....	4
*Hampton	737	13	.....	.....	.....	.....	.....	.....	.....	1	.....
Hartford	1,493	23	.....	.....	.....	.....	.....	.....	.....	2	3
Hebron	1,965	23	.....	1	.....	1	.....	.....	.....	.....	1
Jackson	1,129	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingsbury	5,112	95	.....	2	.....	.....	.....	1	3	5	10
Putnam	554	4	.....	.....	.....	.....	.....	.....	.....	1	1
Salem	3,167	46	.....	.....	.....	.....	.....	.....	.....	.....	6
White Creek	2,680	13	.....	.....	.....	.....	.....	.....	.....	.....	1
Whitehall (T.)	1,009	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whitehall	4,434	45	.....	1	1	1	.....	.....	1	2	1
*Greenwich	4,431	49	.....	.....	.....	.....	.....	.....	.....	2	11
Wayne County	48,262										
Newark	3,000	64	1	.....	.....	.....	.....	.....	1	1	10
Arcadia	3,000	39	.....	1	.....	.....	.....	.....	1	.....	2
Butler	1,960	24	.....	1	.....	.....	.....	.....	.....	.....	1
Galen	2,000	15	.....	.....	.....	.....	.....	.....	.....	1	.....
Clyde	3,600	61	.....	1	.....	1	.....	1	.....	2	7
Huron	1,713	21	.....	.....	.....	.....	.....	.....	.....	1	1
Lyons	6,127	119	.....	2	.....	.....	.....	.....	.....	6	12
Macedon	2,520	31	.....	.....	.....	.....	.....	.....	.....	1	1

Palmyra	4,173	50							1	1	11
Rose	1,013	17								1	
Savannah	1,823	19	1	2	1					1	
Sodus	5,066	57								1	
Walworth	2,210	33									1
Williamson	2,682	47		1							4
Wolcott	3,273	53		1						1	3
Westchester County	148,931										
Yonkers	35,000	712		8	4	4		4	73	71	61
Mount Vernon	15,513	299		3		2		10	14	31	31
Bedford	3,267	43		1		1					1
Cortlandt	5,525	138				1	12	11	5	7	6
Peekskill	9,675	186	1	1	2	1	2	3	10	6	25
East Chester	2,250	47						2	1	4	
Greenburgh	11,407	226			4		2		15	26	17
Harrison	1,444	23								2	3
Mamaroneck	2,470	59							5	1	3
Mount Pleasant	5,870	154		2						4	10
Lewisboro	1,369	30								6	1
Newcastle	2,187	44						1	1	3	4
New Rochelle	8,217	177							9	9	10
New Rochelle (T.)	1,500	21								1	
North Castle	1,463	21							1	1	2
North Salem	1,939	27									
Ossining	700	27									2
Sing Sing	9,352	137		3	2	1			4	13	24
Pelham	2,696	70						1		3	11
Poundridge	841	18									
Rye	4,406	110	1						3	6	9
Port Chester	5,274	122		3	1			1	14	19	5
Scarsdale	594	6									

RECORD OF EACH REPORTING LOCAL BOARD OF HEALTH, ETC.—(*Concluded*).

NAME OF PLACE.	Population.	All deaths.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria	Diarrhœa.	Consumption.
Westchester County (*Continued*).											
Somers	1,743	40	.....	.....	.....	.....	.....	.....	.....	7	4
Westchester	8,326	117	1	.....	.....	.....	.....	1	11	1	13
White Plains (T)	1,133	11	.....	.....	.....	.....	.....	.....	.....	.....	2
White Plains	4,042	129	1	1	1	1	.....	.....	2	20	9
Yorktown	2,241	51	.....	.....	.....	.....	.....	1	2	.....	2
Wyoming County	31,218										
Arcade	1,850	34	.....	.....	.....	2	.....	.....	.....	.....	.....
Attica	2,845	52	.....	1	.....	.....	.....	.....	.....	1	3
Bennington	2,083	34	.....	3	.....	.....	.....	.....	1	.....	1
Castile	2,344	34	1	1	.....	.....	.....	1	1	1	1
Covington	1,119	14	1	1	.....	.....	.....	.....	.....	1	1
Eagle	1,154	13	.....	1	.....	.....	.....	.....	.....	1	1
Gainesville	2,302	26	.....	1	.....	.....	.....	.....	1	.....	1
Genesee Falls	697	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Java	1,900	33	.....	.....	.....	.....	.....	.....	1	.....	3
Middlebury	1,605	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orangeville	1,123	19	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perry	2,990	46	.....	1	.....	.....	.....	1	.....	3	4
Pike	1,334	16	.....	.....	.....	.....	.....	.....	.....	.....	2
Sheldon	2,067	39	.....	.....	.....	.....	.....	.....	.....	1	1
Warsaw	4,698	80	.....	.....	.....	.....	.....	.....	13	6	4
Wethersfield	1,026	14	.....	2	.....	.....	.....	.....	.....	.....	.....

Barrington	1,51[illegible]	[illegible]	......	......	......	......	......	......	....	1	....
Benton	2,202	25	......	......	......	1	......	......	....	1	1
Italy	1,190	8	......	1	......	......	......	......	....	....	....
Jerusalem	2,801	42	......	......	......	......	......	......	1	....	2
Middlesex	1,364	25	......	1	......	......	......	......	....	....	2
Milo	2,322	18	......	1	......	......	......	......	....	....	2
Penn Yan	4,254	62	......	2	......	1	......	......	....	2	5
Potter	1,693	17	......	2	......	......	......	......	....	....	....
Starkey	2,668	11	......	......	......	......	......	......	....	....	....
Torrey	1,137	2	......	......	......	......	......	......	....	....	....

MONTHLY BULLETIN OF THE

Abstract of reports of deaths and causes in the foll

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns i

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.
MARITIME DISTRICT: Totals	.....	6,938	22.90	2,180	31.5	103.20
NEW YORK CITY	1,935,000	4,192	24.75	1,386	33.0	135.70
BROOKLYN	1,086,000	2,074	22.50	614	29.6	105.15
LONG ISLAND CITY	35,745	.....	.....	0	.....	.....
Newtown	19,776	45	27.00	20	45.0	200.00
Oyster Bay	14,887	27	21.72	5	24.0	....
Hempstead	23,991	35	18.00	8	23.0	85.50
North Hempstead	8,726	12	16.60	3	25.0	83.30
Jamaica	17,654	39	26.50	15	40.0	90.00
Flushing	20,816	35	20.20	10	28.5	85.75
Southold	7,671	10	15.60	1	10.0	100.00
Sag Harbor	3,000	4	16.00	0	.....	250.00
Huntington	8,253	9	.....	4	.....	.....
Brookhaven	13,493	23	20.70	6	25.0	40.00
New Brighton	17,261	34	23.80	6	17.6	30.00
Edgewater	15,000	23	18.40	3	13.0	.....
Port Richmond	6,390	14	24.50	6	42.8	.....
Westfield	8,648	6	....	0	.....	.....
YONKERS	35,000	58	19.50	21	36.2	155.15
Westchester	8,326	22	31.00	8	36.5	45.00
Greenburgh	11,630	18	19.00	3	16.8	50.00
MOUNT VERNON	15,513	29	22 45	8	27.5	35.00
Port Chester	5,274	14	30.00	5	35.7	285.00
Sing Sing	9,352	11	.....	0	.....	.....
New Rochelle	8,217	24	34.80	8	33.3	40.00
Peekskill	9,676	10	....	5	.....	.....
White Plains	4,042	12	35.00	2	16.7	82.50
Rest of District	.....	158	18.00	33	20.5	120.00
HUDSON VALLEY DISTRICT: Totals	.....	1,034	17.75	252	24.5	110.00
ALBANY	98,000	220	26.84	66	30.0	118.20
COHOES	23,234	50	25.00	24	48.0	100.00
TROY	64,986	82	15.20	15	18.3	122.00
West Troy	12,967	22	21.50	8	36.4	181.80
Green Island	4,463	15	39.50	6	40.0	66.67
Lansingburgh	10,550	14	16.00	4	28.5	214.28
Hoosick Falls	7,014	.....	.....	0	.....	.....
Greenbush	7,462	16	26.30	3	18.7	.....
Coxsackie	3,824	6	19.00	1	16.7	.....
Catskill	4,920	10	24.30	4	40.0	100.00
HUDSON	9,633	18	22.30	6	33.0	161.60
KINGSTON	21,500	33	18.50	11	33.0	151.50
Ellenville	3,000	2	8.00	0	....	.....
Marbletown	3,689	6	19.80	1	16.7	.....
Rosendale	6,125	5	10.00	3	60.0	400.00
Esopus	5,085	2	.....	0	.....	.....
Saugerties	4,237	9	25.47	0	.....	.....
POUGHKEEPSIE	23,200	30	15.50	10	30.0	233.00
Fishkill	11,726	16	15.50	2	12.5	.....
Wappinger Falls	3,718	10	32.20	4	40.0	200.00
NEWBURGH	24,536	44	21.58	10	22.7	24.70
Port Jervis	9,327	13	16.65	2	15.3	153.00
MIDDLETOWN	11,612	20	20.20	6	30.0	50.00
Warwick	6,000	4	8.00	1	25.0	.....

STATE BOARD OF HEALTH.

cts, cities and towns, during January, 1895.

For boundaries of *Sanitary Districts* see Annual Summary.]

Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
78	32	15	42	408	57	1,798	799	46	355	420	520	476	155	286	160	1207
68	26	9	27	219	38	1,064	489	37	233	273	247	316	99	197	63	741
6	6	5	11	148	8	558	239	7	80	117	209	80	40	70	52	404
....	....	....	....	9	.....	11	6	....	3	3	1	6	....	3	2	1
....	....	....	....	....	.....	7	2	....	2	2	6	2	....	1	2	3
....	....	....	....	2	1	9	3	....	1	1	1	5	2	1	2	7
....	....	....	....	1	.....	3	2	....	....	....	2	1	1	....	2	....
....	....	....	....	1	2	14	5	....	4	....	2	6	....	1	....	4
....	....	....	....	1	1	14	1	....	2	2	4	3	1	....	3	2
....	....	....	1	....	.....	.....	1	....	.....	1	3	2	....	1	....	1
....	....	....	....	....	....	1	....	....	....	....	.....	1	....	....	1	....
1	....	....	....	....	1	2	1	....	2	....	.....	....	....	1	1	....
....	....	....	....	1	.....	6	....	....	2	1	2	4	....	1	4	2
....	....	1	....	....	.....	9	4	....	5	2	5	5	1	..	1	1
....	....	....	....	....	.....	4	5	....	3	2	.....	2	1	3	2	1
....	....	....	....	....	.....	4	2	....	.....	1	.....	1	....	1	1	4
....	....	....	....	....	.....	2	1	....	.....	....	1	....	....	....	1	1
....	....	....	....	8	.....	18	3	....	3	2	5	5	2	....	2	9
....	....	....	....	1	.....	8	3	....	2	....	1	3	....	....	....	4
....	....	....	....	1	.....	8	2	....	.....	2	2	.....	....	....	2	1
....	....	....	....	1	.....	10	3	1	1	2	1	4	....	1	3	2
....	....	....	....	2	1	4	1	1	....	....	1	2	....	....	....	1
1	....	....	....	1	.....	2	4	....	.....	....	.....	.....	1	....	1	1
....	....	....	....	1	.....	5	1	....	1	1	4	4	....	2	3	2
....	....	....	....	2	.....	1	....	....	.....	1	1	1	....	....	1	3
1	....	....	....	....	.....	2	1	....	.....	1	1	3	1	1	1	....
1	....	....	3	9	5	32	20	....	11	6	21	20	6	2	10	12
9	1	5	5	30	20	214	115	5	71	61	100	136	29	26	77	90
2	....	1	1	5	9	41	35	3	14	22	14	27	3	9	2	24
1	....	1	....	1	.....	2	5	....	8	1	2	8	....	....	4	8
1	....	1	....	4	.....	25	9	....	5	5	6	2	2	3	3	5
1	....	....	....	....	1	8	2	....	1	1	....	3	....	....	....	3
....	....	....	....	....	.....	4	2	....	1	....	2	4	....	....	....	1
1	....	....	....	1	.....	3	2	....	.....	3	1	....	....	....	2	1
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....	....	....	....	....	2	3	1	....	2	1	1	5	1	....	1	....
....	....	....	1	1	1	3	2	....	5	....	9	3	....	....	1	....
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....	....	....	....	....	.....	1	....	....	....	....	....	....	....	1	....	....
....	....	....	....	....	.....	1	2	....	....	....	2	.....	1	1	1	1
....	....	....	....	5	.....	3	2	....	.....	2	4	3	2	....	3	4
....	....	....	....	....	.....	4	....	1	1	1	3	1	1	....	2	2
....	....	....	....	2	.....	2	2	....	1	....	2	1	....	....	....	....
....	....	....	....	....	1	13	6	....	1	4	3	5	....	1	6	4
....	....	....	....	2	.....	2	1	....	.....	1	1	2	1	....	2	1
....	....	....	....	1	.....	6	2	....	3	....	3	1	1	....	1	2
....	....	....	....	....	.....	2	....	....	....	....	1	1	....	....	....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Goshen	4,646	2	.....	1	50.0	.....	.....	.....
Montgomery	5,259	8	18.25	1	12.5	.....	.....	.....
Haverstraw	7,714	14	21.85	2	14.2	71.00	.....	.....
Nyack	5,603	2	.....	1	50.0	.....	.....	.....
Ramapo	6,600	9	16.38	0	.....	.....	.....	.....
Rest of District	.....	352	14.50	60	17.3	107.50	1	3
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	375	12.00		25.2	58.70	1	3
WATERTOWN	16,982	32	22.59	8	25.0	94.00	.....	1
Ellisburgh	4,223	6	17.00	1	16.7	.....	.....	.....
Cape Vincent	3,000	3	12.00	2	67.0	.....	.....	.....
Clayton	4,250	1	.....	1	.....	.....	.....	.....
OGDENSBURG	11,959	25	25.00	9	36.0	.....	.....	.....
Gouverneur	5,921	6	13.00	2	33.0	330.00	1	.....
Potsdam	4,000	6	18.00	2	33.0	.....	.....	.....
Canton	6,013	9	18.00	0	.....	.....	.....	.....
Malone	5,000	4	10.00	1	25.0	.....	.....	.....
Plattsburgh	7,010	8	15.14	2	25.0	125.60	.....	.....
Glens Falls	10,000	18	22.68	2	11.0	55.00	.....	.....
Whitehall	4,484	3	10.00	3	.....	.....	.....	.....
Fort Edward	4,382	7	19.10	2	28.5	.....	.....	.....
Kingsbury	5,112	6	15.40	2	33.0	330.00	.....	1
Granville	5,281	7	15.90	4	57.0	.....	.....	.....
Salem	3,167	5	19.00	0	.....	.....	.....	.....
Greenwich	4,431	4	11.00	1	25.0	.....	.....	.....
Rest of District	.....	225	12.00	50	22.0	60.00	.....	1
MOHAWK VALLEY DISTRICT:								
Totals	.....	422	13.50	94	22.0	100.00	2	.....
SCHENECTADY	22,858	43	22.50	12	28.0	140.00	.....	3
Cobleskill	3,436	6	21.00	0	.....	.....	.....	.....
AMSTERDAM	18,512	10	.....	2	.....	.....	.....	.....
Fort Plain	3,000	6	24.00	0	.....	166.67	.....	.....
Johnstown	7,768	10	15.40	2	20.0	100.00	.....	.....
GLOVERSVILLE	14,694	18	14.70	5	27.5	110.00	.....	1
Little Falls	8,783	10	13.66	1	10.0	100.00	.....	1
Herkimer	5,150	12	12.00	4	33.0	330.00	.....	.....
Ilion	4,057	7	21.00	2	28.5	.....	.....	.....
UTICA	46,608	60	15.50	16	26.7	150.00	.....	.....
Whitestown	5,225	10	23.00	4	40.0	200.00	.....	.....
ROME	13,638	10	.....	2	.....	.....	.....	.....
Boonville	3,512	4	13.66	0	.....	.....	.....	.....
Camden	3,675	4	13.00	0	.....	.....	.....	.....
Waterford	5,522	7	15.20	2	28.5	.....	.....	.....
Mechanicville	3,000	5	20.00	4	80.0	400.00	.....	.....
Ballston Spa	3,527	2	8.00	0	.....	.....	.....	.....
Saratoga Springs	12,000	24	24.00	7	30.0	200.00	.....	.....
Rest of district	.....	174	12.50	31	17.5	60.00	2	1
SOUTHERN TIER DISTRICT;								
Totals	.....	434	13.00	99	23.0	85.00	4	3
BINGHAMTON	34,514	37	12.86	10	27.0	90.00	.....	.....
Owego	6,000	9	18.00	0	.....	.....	.....	.....
Candor	3,525	4	13.25	1	25.0	.....	.....	.....
Waverly	4,123	8	23.50	1	12.5	.....	.....	.....
ELMIRA	30,000	57	22.80	11	20.0	140.00	1	4
Horseheads	3,319	2	8.00	0	.....	.....	.....	.....

JANUARY — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	1	1	....	....	....	.....	.....	....	....	....	....
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....	....	....	....	....	....	.....	2	.....	....	3	....	1	2	....	....	1	....
....	3	1	3	3	7	5	65	34	1	22	13	37	51	15	11	42	25
..	4	....	3	4	3	4	61	44	7	25	17	43	52	12	6	40	46
....	....	....	1	1	....	1	3	4	1	1	3	4	4	....	....	2	7
....	....	....	....	....	....	.....	1	1	....	1	....	1	.....	1	....	1	....
....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	2	....	....	....	1
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....	....	....	....	....	....	.....	8	4	....	1	3	1	.....	....	....	2	6
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....	....	....	....	....	....	.....	.....	2	....	.....	....	.....	1	....	....	1	2
....	....	....	....	....	....	.....	.....	1	....	1	....	2	3	....	....	1	1
....	....	....	....	....	....	.....	.....	.....	....	.....	....	2	.....	....	....	1	1
....	....	....	....	1	....	1	.....	2	....	.....	1	1	2	....	....	....	1
....	....	....	....	....	....	.....	3	3	....	.....	....	4	2	1	....	2	2
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....	3	....	2	2	3	2	37	25	6	19	8	24	34	10	5	24	20
....	5	....	4	7	12	5	70	47	3	25	30	36	69	10	13	36	42
....	....	....	1	....	....	2	9	5	1	3	5	1	8	....	1	1	3
....	....	....	....	....	....	.....	.....	.....	1	.....	2	....	3	....	....	.....	....
....	....	....	....	....	....	.....	1	.....	....	1	2	1	2	....	....	1	2
....	....	....	1	....	....	.....	.....	.....	....	1	....	.....	.....	1	....	2	1
....	1	....	....	....	....	.....	1	2	....	.....	1	1	....	....	3	....	1
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....	....	....	....	....	....	.....	.....	1	....	2	2	2	1	....	....	1	....
....	....	....	....	....	2	.....	.....	1	....	1	1	.....	....	....	1	2	4
....	....	....	....	....	....	.....	2	2	....	.....	....	.....	....	....	....	1	2
....	3	....	1	4	1	1	2	2	1	5	3	5	6	....	3	4	3
....	....	....	....	2	....	.....	2	1	....	1	....	1	1	....	....	....	2
....	....	....	....	....	....	.....	1	.....	....	.....	....	2	5	....	1	1	....
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....	1	....	....	2	....	1	2	4	....	1	1	1	2	....	....	1	....
....	....	....	1	2	3	1	40	18	....	7	8	16	37	7	3	19	5
....	....	....	2	3	18	2	99	45	3	30	16	41	45	12	14	42	9
....	....	....	1	....	2	.....	8	5	....	3	1	3	4	1	1	4	4
....	....	....	....	....	....	.....	1	.....	....	1	1	.....	2	....	....	2	2
....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	.....	2	....	....	1
....	....	....	....	....	....	.....	5	.....	....	1	....	.....	1	....	....	1	....
....	....	....	....	1	....	2	15	10	....	2	1	5	6	....	1	6	3
....	....	....	....	....	....	.....	.....	.....	....	1	....	.....	1	....	....	....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—*(Cont'd)*:								
HORNELLSVILLE	11,898	18	14.00	5	38.0	70.00	....	....
Bath	3,261	5	18.40	0	.....	.....	....	....
CORNING	10,025	18	15.60	5	38.5	153.00	1	....
Wellsville	5,088	5	12.00	1	20.0	.....	....	....
Olean	7,358	9	15.45	2	22.0	.....	....	....
Salamanca	3,700	2	8.00	1	50.0	.....	....	....
DUNKIRK	10,000	10	12.00	3	30.0	400.00	....	....
JAMESTOWN	18,627	25	16.15	9	37.0	.....	....	1
Westfield	3,000	1	.....	0	.....	.....	....	....
Fredonia	3,400	1	.....	1	.....	.....	....	....
Rest of district	.....	233	12.00	50	21.5	73.00	2	3
EAST CENTRAL DISTRICT:								
Totals	.....	465	14.50	86	18.6	77.50	1	12
SYRACUSE	91,944	131	17 10	34	26.1	92.30	....	3
Baldwinsville	3,040	3	12.00	0	.....	.....	....	....
DeWitt	5,182	9	21.50	1	10 0	.....	....	....
Cortland	8,590	13	18.00	3	23.0	230.00	....	....
Homer	3,000	1	4.00	0	.....	.....	....	....
Oneida	6,088	8	16.00	0	.....	125.00	....	1
Hamilton	4,110	5	15.00	2	40.0	.....	....	....
Cazenovia	3,808	7	22.00	2	28.5	.....	....	....
Brookfield	3,235	3	11.00	1	33.0	.....	....	....
Norwich	5,212	3	8.00	0	.....	.....	....	....
Oneonta	6,776	12	22.25	0	.....	.....	....	....
Worcester	2,670	3	12.00	0	.....	330.00	....	....
Cooperstown	3,000	4	16.00	0	.....	.....	....	....
Walton	4,811	9	23.50	1	10.0	100.00	....	....
Delhi	3,000	4	16.00	0	.....	.....	....	....
Liberty	3,471	2	10.00	0	.....	.....	....	....
Rest of district	.....	248	13.20	42	17.0	72.00	1	8
WEST CENTRAL DISTRICT:								
Totals	.....	338	13.50	46	13.7	43.60	....	3
AUBURN	24,737	32	16.00	7	23.0	62.50	....	....
ITHACA	13,460	9	.....	2	.....	.....	....	....
Hector	4,832	3	.....	0	.....	.....	....	....
Waterloo	4,350	3	9.00	1	33.0	330.00	....	....
Seneca Falls	6,500	9	.....	1	.....	.....	....	1
Geneva	7,557	15	24.00	3	21.4	71.40	....	....
Canandaigua	5,868	8	16.50	1	12.5	.....	....	....
Manchester	4,181	8	23.00	1	12.5	.....	....	....
Phelps	5,150	6	14.00	0	.....	.....	....	....
Penn Yan	4,254	5	14.50	1	20.0	.....	....	....
Batavia	7,221	8	13.00	3	37.5	125.00	....	....
Dansville	3,758	4	13.00	0	.....	.....	....	....
Le Roy	3,000	4	16.00	3	75.0	.....	....	....
Warsaw	4,700	5	13.00	2	40.0	200.00	....	....
Rest of district	.....	219	13.16	21	10.0	45.00	....	2
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	974	15.56	283	28.6	134.30	7	16
BUFFALO	300,000	372	14.88	149	40.0	186.50	7	5
TONAWANDA	7,145	6	.....	2	.....	.....	....	....
Amherst	3,900	5	15.15	0	.....	.....	....	....
North Tonawanda	4,800	13	26.00	3	23.0	150.00	....	1
LOCKPORT	16,088	29	15.00	6	20.0	100.00	....	1
NIAGARA FALLS	16,000	22	16.50	6	27.2	272.70	....	4

FOR JANUARY — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	1	.....	2	1	....	2	2	3	1	....	....	....	1
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....	....	....	....	....	....	....	.....	11	1	1	4	....	2	3	....	....	1	1
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....	....	....	....	1	1	10	.....	51	26	2	14	10	21	20	9	10	22	31
1	....	1	....	4	4	11	2	70	51	6	26	22	47	63	26	16	48	54
1	....	1	....	....	3	4	.....	20	20	3	7	2	13	11	3	6	13	21
....	....	....	....	....	....	....	.....	.....	1	....	1	1	.....	.....	....	....	....	....
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....	....	....	....	2	....	5	2	42	19	1	13	10	27	40	16	7	29	26
1	....	1	....	2	....	7	3	57	35	2	26	19	40	44	14	11	45	28
....	....	....	....	1	....	1	.....	10	2	....	3	....	2	3	1	1	2	6
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1	....	1	....	....	....	4	1	33	23	2	17	9	30	30	12	6	32	16
3	....	5	1	3	13	58	15	209	108	9	59	37	89	152	32	31	58	69
1	....	2	1	1	8	34	10	86	44	5	20	11	24	63	9	9	15	17
....	....	....	....	....	....	1	.....	.....	1	1	.....	....	1	.....	....	1	....	1
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....	..	....	....	....	....	....	1	8	2	....	5	1	2	3	....	1	2	3
....	....	1	....	....	....	....	1	2	1	....	4	....	.....	1	1	2	....	5

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT.—(*Continued*):								
Medina	4,500	4	12.00	1	25.0	.....	....	....
Albion	4,536	5	13.00	1	20.0	.....	....	....
Brockport	3,742	6	18.50	1	16.7	166.60	....	....
ROCHESTER	150,000	228	18.25	68	30.0	80.00	....	2
Palmyra	4,173	2	.....	0	.....	.....	....	....
Newark	3,000	7	28.00	1	14.2	.....	....	....
Lyons	6,127	9	18.00	1	11.0	.....	....	....
Clyde	3,000	3	12.00	0	.....	330.00	....	....
OSWEGO	21,966	39	21.25	6	15.0	100.00	....	....
Fulton	4,214	11	28.00	4	40.0	400.00	....	1
Richland	3,637	5	15.60	1	20.0	.....	....	....
Rest of district	.....	217	13.00	85	15.5	60.00	....	2
Totals for the State	.....	10,980	20.18	3,132	28.6	100.40	51	106
Average for Jan. for past 10 years	.....	9,550	.....	2,755	30.0	137.26	44	98
Totals for December, 1894	.....	9,000	16.60	2,567	28 5	133.00	33	139

REMARKS.—There were 10,980 deaths reported during the month, which is an estimated increase of 64 deaths daily over December, when the death rate was 16.60. The total mortal more deaths from acute respiratory diseases and the same from consumption, while from local diseases. Compared with December, 1894, there were 100 fewer deaths from zymotic from consumption, 200 more from diseases of the circulatory system, 100 more from old age, parts of the State, but is most marked in the Maritime district, in which alone is the mortality of December, has caused the increase of this month, and it is estimated that there were 1,400 the month would probably not have exceeded 9,565, or about the average of the past ten (aside from grippe) is unusually low. Typhoid fever has decreased since December, and is theria has not caused so few deaths in January for several years, and the number has fallen showing itself in all parts of the State. Whooping cough caused 77 deaths, and it appears to zymotic diseases show little variation. From smallpox there were three deaths, all in New developing during the month. Consumption, the reported mortality from which increases diseases, from the same cause, is increased, but deaths from old age have not shown the 3 degrees below the average normal, and westerly winds, with deficiency in precipitation.

FOR JANUARY — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	.....	1	.....	....	1	1	1	.....	....	...	....	....
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....	....	....	....	....	....	1	.....	1	.....	....	.....	....	.....	3	....	....	....	1
2	....	....	....	....	4	9	1	48	18	1	14	6	28	44	6	11	14	20
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	.....	....	....	1	....
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....	....	....	....	....	....	4	.....	7	10	....	1	....	6	6	1	1	1	3
....	....	....	....	....	....	3	.....	2	1	....	1	....	.....	1	1	....	1	....
....	....	....	....	....	....	....	.....	2	.....	....	1	....	.....	1	....	....	....	1
....	....	1	....	2	1	6	1	44	28	2	16	13	21	23	10	6	23	18
30	3	103	34	38	78	547	108	2,578	1,214	81	617	622	916	1,037	290	403	506	1586
51	12	188	123	36	87	586	96	2,093	1,178	98	487	486	654	981	218	286	657	1070
35	11	82	35	34	53	672	103	1,555	1,117	58	551	628	719	1,033	269	384	401	1088

death rate per 1,000 population annually of 20.18, and a daily average mortality of 854, an
ity is a little greater than that of January, 1894, compared with which month, there were 100
common zymotic diseases there were 250 fewer deaths, the increase being in deaths from
diseases, but there were 1,000 more deaths attributed to acute respiratory diseases, 100 more
and 500 more from unclassified causes. The increase over December is distributed over all
greater than that of a year ago. Epidemic influenza, which failed to impress the mortality
deaths attributed to it, or 200 more than in January, 1894, and except for it the mortality of
years; it will apparently cause a still larger mortality in February. The zymotic mortality
the same as usual for this season. Measles is much less prevalent than a year ago. Diph-
from 672 in December, which was about the average for that month, to 547, the decrease
be pretty generally distributed, deaths occurring in the country as well as the cities. Other
York; there is one case of this disease in Utica and two in the town of Westchester,
during a grippe epidemic, caused 1,247 deaths, which is excessive. The mortality from local
marked increase noted in January, 1894. The weather was characterized by low temperature,

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	6,189	23.40	2,070	33.4	100.00	24	24
NEW YORK CITY	1,995,000	3,643	23.80	1,302	35.7	107.10	14	16
BROOKLYN	1,058,000	1,753	21.00	586	33.2	96.85	5	7
LONG ISLAND CITY	35,745	59	18.20	21	34.0	20.00	....	....
Newtown	19,776	33	20.00	15	45.5	120.00	....	....
Oyster Bay	14,887	33	26.56	6	18.0	30.00	1	....
Hempstead	23,991	47	24.00	14	30.0	.....	....	....
North Hempstead	8,726	14	19.32	4	28.5	.....	....	....
Jamaica	17,654	36	20.50	9	25.0	60.00	1	....
Flushing	20,816	41	24.00	13	30.0	75.00	1	....
Southold	7,671	10	15.60	2	20.0	.....	....	....
Sag Harbor	3,000	7	28.00	3	42.8	.....	....	....
Huntington	8,253	10	14.60	2	20.0	.....	....	....
Brookhaven	13,493	20	.....	1	.....	.....	....	....
New Brighton	17,261	34	23.80	7	35.0	.....	....	....
Edgewater	15,000	25	20.00	4	16.0	.....	....	....
Port Richmond	6,390	11	20.60	4	36.3	90.00	....	1
Westfield	8,648	9	13.00	2	22.0	110.00	....	....
YONKERS	35,000	82	27.53	25	30.5	36.50	....	....
Westchester	8,326	24	34.50	7	30.0	166.00	....	....
Greenburgh	11,630	20	20.60	5	25.0	.....	....	....
MOUNT VERNON	15,513	20	15.50	5	30.0	.....	....	....
Port Chester	5,274	9	19.35	5	45.0	110.00	....	....
Sing Sing	9,352	13	16.67	2	16 0	80.00	....	....
New Rochelle	8,217	13	19.00	4	30.5	.....	....	....
Peekskill	9,676	17	21.10	4	24.5	123.00	1	....
White Plains	4,042	14	40.00	1	7.0	70.50	....	....
Rest of District	.....	192	.....	22	12.0	60.00	1	....
HUDSON VALLEY DISTRICT: Totals	.....	1,216	21.75	278	22.5	92.00	6	35
ALBANY	100,000	236	38.32	72	30.5	156.75	....	17
COHOES	23,234	44	22.75	18	41.0	160.00	....	2
TROY	65,000	102	18.65	24	24.0	90.00	....	4
West Troy	12,967	24	22.15	10	41.5	41.50	....	....
Green Island	4,463	10	26.90	3	30.0	100.00	....	....
Lansingburgh	10,550	15	17.00	5	33.0	200.00	....	....
Hoosick Falls	7,014	9	15.50	3	33.0	330.00	1	....
Greenbush	7,462	25	40.00	8	33.5	140.00	1	2
Coxsackie	3,824	10	31.80	3	30.0	300.00	1	1
Catskill	4,920	13	31.50	3	23.0	.....	....	....
HUDSON	9,633	18	34.30	5	18.0	35.00	....	1
KINGSTON	21,500	48	26.88	10	20.5	100.00	2	....
Ellenville	3,000	3	12.00	2	60.0	.....	....	....
Marbletown	3,689	3	11.60	0	.....	.....	....	....
Rosendale	6,125	14	26.00	5	35.5	.....	....	....
Esopus	5,035	12	28.00	5	41.6	90.00	....	....
Saugerties	4,237	7	19.80	1	14.3	.....	....	....
POUGHKEEPSIE	23,200	57	29.46	14	24.6	105.00	....	....
Fishkill	11,726	35	35.60	6	17.0	56.20	....	2
Wappinger Falls	3,718	5	16.10	1	20.0	200.00	....	....
NEWBURGH	24,536	43	21.00	9	21.0	46.50	....	....
Port Jervis	9,327	17	21.75	4	24.5	.....	....	....
MIDDLETOWN	11,612	30	30.30	7	23.3	100.00	....	....
Warwick	6,000	9	18.00	3	33.0	.....	....	....
Goshen	4,646	13	42.00	2	15.0	90.00	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns during February, 1895.

type. For boundaries of *Sanitary Districts*, see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
3	5	78	37	27	51	303	46	1,440	751	53	317	424	474	455	142	238	127	1170
2	4	65	33	17	30	175	34	804	464	41	196	245	216	282	78	154	42	731
....	1	13	4	10	16	106	9	401	206	7	79	139	196	71	47	54	33	349
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....	....	....	....	....	1	3	.....	11	3	1	2	2	.....	3	1	1	....	5
....	....	....	....	....	....	....	.....	8	4	....	3	....	4	6	....	1	4	2
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....	....	....	....	1	....	....	.....	3	1	....	1	1	2	1	1	7	3	....
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....	....	....	....	....	2	8	1	46	20	2	11	10	20	22	8	5	21	15
2	....	9	1	2	6	22	30	290	101	15	66	64	102	162	29	25	102	147
....	....	....	....	....	....	4	16	45	17	1	14	10	16	38	9	3	4	42
....	....	....	....	....	....	1	4	10	6	....	2	....	1	5	1	....	2	10
1	....	3	....	....	....	1	.....	25	10	3	2	6	8	19	4	2	5	9
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....	....	....	....	1	....	2	.....	5	5	....	1	1	4	4	1	....	2	4
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....	....	1	....	....	....	....	.....	4	2	....	.....	....	.....	1	....	....	4	1

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Montgomery	5,259	3	.....	0	.....	.....	....	...
Haverstraw	7,714	10	15.00	4	40.0	200.00	....	1
Nyack	5,603	8	17.12	2	25.0	.....	....	....
Ramapo	6,600	11	20.00	2	20.0	.....	....	....
Rest of District	.....	372	.....	47	13.0	60.00	1	5
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	338	13.00	70	21.0	61.00	1	4
WATERTOWN	16,982	22	15.53	4	18.0	90.00	....	1
Ellisburgh	4,223	3	10.00	0	.....	.....	....	....
Cape Vincent	3,000	1	.....	0	.....	.....	....	....
Clayton	4,250	2	.....	2	.....	.....	....	....
OGDENSBURG	11,959	14	15.00	6	42.8	70.00	...	....
Gouverneur	5,921	.....	.....	0	.....	.....	....	....
Potsdam	4,000	5	15.00	0	.....	.....	....	....
Canton	6,013	6	12.00	0	.....	.....	....	....
Malone	5,000	10	24.00	0	.....	.....	....	....
Platsburgh	7,010	11	19.00	6	54.5	90.00	...	....
Glens Falls	10,000	18	21.60	5	27.5	175.60	....	....
Whitehall	4,434	3	10.00	1	33.0	230.00	....	....
Fort Edward	4,382	2	.....	1	50.0	.....	....	....
Kingsbury	5,112	5	12.00	0	.....	.....	....	....
Granville	5,281	4	10.00	0	.....	250.00	....	....
Salem	3,167	.....	.....	0	.....	.....	....	....
Greenwich	4,431	4	12.00	1	25.0	.....	....	....
Rest of District	.....	228	.....	44	20.0	46.00	1	3
MOHAWK VALLEY DISTRICT:								
Totals	.....	498	17.00	101	20.0	100.00	1	6
SCHENECTADY	22,858	43	22.50	16	37.2	116.25	....	2
Cobleskill	3,436	5	17.50	1	20.0	400.00	....	1
AMSTERDAM	18,542	17	.....	3	.....	.....	....	....
Fort Plain	3,000	2	10.00	0	.....	.....	....	....
Johnstown	7,768	12	18.50	1	8.5	85.00	....	....
GLOVERSVILLE	14,694	23	18.80	6	25.5	.....	....	....
Little Falls	8,783	13	17.75	1	7.7	.....	....	....
Herkimer	5,150	10	23.30	0	.....	.....	....	....
Ilion	4,057	6	.....	2	.....	.....	....	....
UTICA	46,6?8	73	20.00	19	27.5	30.00	....	....
Whitestown	5,225	12	24.00	2	16.7	.....	....	....
ROME	13,638	20	17.60	2	10.0	.....	....	....
Boonville	3,512	2	8.00	1	50.0	.....	....	....
Camden	3,675	4	13.00	1	25.0	.....	....	....
Waterford	5,522	9	19.50	0	.....	.....	....	1
Mechanicville	3,000	4	16.00	1	25.0	.....	....	....
Ballston Spa	3,527	8	21.00	3	42.5	.....	....	....
Saratoga Springs	12,000	18	18.00	5	27.5	55.00	1	....
Rest of District	.....	217	.....	37	16.5	32.50	....	2
SOUTHERN TIER DISTRICT:								
Totals	.....	519	16.25	107	20.5	63.50	....	4
BINGHAMTON	34,514	68	23.63	11	17.0	100.00	....	2
Owego	6,000	6	12.00	1	16.7	.....	....	....
Candor	3,525	6	20.40	2	33.0	.....	....	....
Waverly	4,123	7	20.00	2	28.5	142.80	....	....
ELMIRA	30,000	48	19.20	9	16.2	125.00	....	1
Horse heads	3,319	2	.....	0	.....	.....	....	....
HORNELLSVILLE	11,898	10	12.00	3	30.0	100.00	....	....
Bath	3,261	5	18.40	2	40.0	.....	....	....

FEBRUARY — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*).								
CORNING	10,025	14	17.00	6	42.8	7.00	....	....
Wellsville	5,033	7	17.00	1	14.2	.....	....	....
Olean	7,358	9	15.00	1	10.0	.....	....	....
Salamanca	3,700	8	25.90	0	.....	.....	....	....
DUNKIRK	10,000	18	21.60	4	22.0	55.00	....	....
JAMESTOWN	18,627	28	18.00	9	30.0	32.00	....	....
Westfield	3,000	1	5.00	0	.....	.....	....	....
Fredonia	3,400	4	14.00	0	.....	.....	....	....
Rest of District	.....	278	.....	56	18.0	52.00	....	1
EAST CENTRAL DISTRICT: Totals	.....	523	18.75	97	18.5	53.50	2	6
SYRACUSE	95,000	143	18.60	35	24.5	70.00	....	2
Baldwinsville	3,040	4	16.00	2	50.0	250.00	....	....
DeWitt	5,182	6	14.10	1	16.7	330.00	....	....
Cortland	8,590	16	22.25	5	31.5	63.00	....	....
Homer	3,000	8	32.00	3	37.5	.....	....	....
Oneida	6,083	11	20.00	2	20.0	100.00	1	....
Hamilton	4,110	12	36.00	0	.....	.....	....	....
Cazenovia	3,803	2	7.00	0	.....	.....	....	....
Brookfield	3,235	.....	.....	0	.....	.....	....	....
Norwich	5,212	2	.....	0	.....	.....	....	....
Oneonta	6,776	8	14.00	2	25.0	.....	....	....
Worcester	2,670	6	24.50	2	33.0	.....	....	....
Cooperstown	3,000	5	20.00	1	20 0	.....	....	....
Walton	4,811	4	10.00	1	25.0	250.00	....	1
Delhi	3,000	9	27.00	2	22 2	.....	....	....
Liberty	3,471	6	20.75	1	16.7	.....	....	....
Rest of District	.....	281	.....	40	14.3	43.00	1	3
WEST CENTRAL DISTRICT: Totals	.....	430	18.25	49	11.4	60.50	2	6
AUBURN	24,737	46	22.30	4	8.6	25.00	...	1
ITHACA	13,460	8	.....	1	.....	.....	....	....
Hector	4,832	5	13.00	0	.....	.....	....	....
Waterloo	4,350	6	16.50	2	33.0	.....	....	....
Seneca Falls	6,500	9	16.65	1	10.0	220.00	....	....
Geneva	7,557	13	20.60	3	23.0	.....	....	....
Canandaigua	5,868	13	25.00	0	.....	.....	....	....
Manchester	4,181	7	20.00	1	14 5	.....	....	....
Phelps	5,150	12	25.00	1	8.5	160.00	....	2
Penn Yan	4,254	12	30.00	0	.....	160.00	..	....
Batavia	7,221	15	25.00	2	13.0	200.00	....	....
Dansville	3,758	7	.....	3	.....	.....	....	....
Le Roy	3,000	5	20.00	0	.....	.....	....	....
Warsaw	4,700	13	.....	3	.....	.....	....	....
Rest of District	.....	259	.....	28	11.0	50.70	2	3
LAKE ONTARIO AND WESTERN DISTRICT: Totals	.....	1,058	18.00	277	26.2	75.00	4	14
BUFFALO	300,000	413	17.00	149	36.0	100.00	2	3
TONAWANDA	7,145	8	.....	2	.....	.....	....	....
Amherst	3,960	7	21.00	2	30.0	.....	....	....
North Tonawanda	4,800	11	27.50	4	31.5	40.00	....	1
LOCKPORT	16,088	16	12.00	5	36.5	62.50	....	....
NIAGARA FALLS	16,000	25	18.75	3	12.0	320.00	....	5
Medina	4,500	8	....	1	.....	.....	....	....
Albion	4,536	4	11.00	1	25.0	.....	....	....

FOR FEBRUARY — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*).								
Brockport	3,742	3	10.00	1	30.0	.....	...	....
ROCHESTER	150,000	224	19.00	54	24.0	59.00	1	4
Palmyra	4,173	4	.....	0	.....	.....	....	....
Newark	3,000	7	28.01	1	14.2	.....	....	....
Lyons	6,127	15	29.25	0	.....	.....	....	....
Clyde	3,000	5	20.00	2	40.0	.....	....	....
OSWEGO	21,966	27	14.30	4	15.0	110.00	....	...
Fulton	4,214	3	.....	1	.....	.....	....	....
Richland	3,637	5	16.00	1	20.0	.....	....	....
Rest of District	.....	273	.....	46	.....	.....	1	1
Totals for the State	.....	10,771	21.55	3,049	28.3	85.40	40	99
Average for Feb. for past 10 years.	.....	8,373	.....	2,650	31.6	140.81	42	83
Totals for January, 1895	.....	10,980	20.18	3,132	28.6	100.40	51	108

REMARKS.—There were 10,731 deaths reported during the month, which is an estimated death this is 30 more deaths daily than in the preceding month, and 94 more than in the month of about 1,400 more deaths during the month than occurred in the same month in 1893 and 1894, had passed its height. A large number of deaths from grippe have been reported, the the complete mortality properly to be credited to this cause can only be estimated by the acute respiratory diseases over January of 300, and over February, 1894, of 600. There is a urinary system; there were 100 more deaths from old age than usual at this season, and from not less than 600. At the same time the mortality for zymotic diseases is unusually low, so that 9,100; it may be estimated that influenza, (grippe) caused 1,600 deaths, or 57 per day to 45 in show a similar mortality from it. The mortality from common zymotic diseases continues, as below the low rate of January, 890 deaths from it being less than in any February for 10 have lower death rates than a year ago, except whooping cough, which caused 87 deaths, confined to the Hudson Valley district, there being an unseasonable prevalence of it 1 in Brooklyn; it does not exist in the State outside the metropolis. Consumption caused its mortality. The prevailing direction of the wind was generally south-west, the velocity with ranges between 44 degrees and -15 degrees, the precipitation continues as in January.

FEBRUARY — (*Concluded*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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....	....	....	....	1	6	2	60	26	5	17	13	31	32	12	3	37	26
5	98	44	38	87	391	107	2,526	1,161	93	600	670	917	1,035	281	351	598	1621
13	181	106	45	76	498	94	1,654	1,039	96	461	454	600	924	192	256	589	928
3	103	34	38	78	547	108	2,578	1,244	81	617	622	917	1,037	290	403	506	1586

per 1,000 population annually of 21.55, the average number of deaths daily being 384; mber, the death rates of these respective months being 20.18 and 16.60. There were he mortality is the same as that of February, 1892, at which time an epidemic of grippe ɔmic having commenced about the first of January, but no record is kept of them, since ase in deaths reported from local diseases. There is a relative increase in deaths from ɛed increase in the reported mortality for diseases of the circulatory system; also of the assified causes, which includes many of the reports of grippe, the number is increased by probable that the undisturbed mortality for the month would not much have exceeded ary, the total for the present epidemic thus far being 3,000. It is probable that March will anuary, low, being at least 300 less than a year ago. Diphtheria has fallen 150 deaths s; there was a decrease of 100 deaths in the maritime districts. All the zymotic diseases ibuted over almost all parts of the State; and typhoid fever, the increase from which is ɛially in Albany. Smallpox caused 5 deaths, (52 in February, 1894); 4 in New York and deaths, which is excessive for the month, due to the grippe epidemic which accelerates ; high, the average mean temperature was 20 degrees, or 6 degrees below the norma han the average.

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	6,422	21.70	2,302	35.8	111.25	31	13
NEW YORK CITY	1,995,000	3,893	23.00	1,471	37.7	121.85	22	8
BROOKLYN	1,086,000	1,894	20.00	644	35.1	119.00	8	2
LONG ISLAND CITY	35,745	46	15.00	15	33.0	43.50	....	....
Newtown	19,776	47	28.50	16	33.5	128.00	....	1
Oyster Bay	14,887	26	20.93	8	30.6	.....	....	....
Hempstead	23,991	40	20.20	7	17.5	50.00	....	....
North Hempstead	8,726	10	14.50	3	30.0	100.00	....	....
Jamaica	17,654	35	23.80	13	37.5	85.50	....	....
Flushing	20,816	39	22.50	10	25.0	250.00	....	....
Southold	7,671	16	25.00	7	43.5	125.00	....	....
Sag Harbor	3,000	3	12.00	0	.....	.....	....	....
Huntington	8,253	13	19.00	1	9.0	90.00	....	....
Brookhaven	13,493	16	14.40	2	12.5	.....	....	....
New Brighton	17,261	32	22.40	5	16.0	90.00	....	1
Edgewater	15,000	18	14.40	3	16.7	110.00	....	....
Port Richmond	6,390	10	18.75	1	10.0	.....	....	....
Westfield	8,648	4	.....	0	.....	.....	....	....
YONKERS	35,000	71	23.61	31	43.0	100.00	....	....
Westchester	8,326	22	31.00	9	40.0	135.00	1	....
Greenburgh	11,630	15	15.40	5	33.0	.....	....	....
MOUNT VERNON	15,513	22	17.00	3	13.6	.....	....	....
Port Chester	5,274	9	19.35	2	22.0	220.00	....	....
Sing Sing	9,352	6	.....	4	66.0	.....	....	....
New Rochelle	8,217	10	14.50	1	10.0	.....	....	....
Peekskill	9,676	14	17.36	3	21.4	71.40	....	....
White Plains	4,042	9	27.00	2	22.0	.....	....	....
Rest of district	.....	162	19.25	36	22.5	75.00	....	1
HUDSON VALLEY DISTRICT: Totals	.....	1,245	21.60	328	26.4	121.20	8	14
ALBANY	100,000	231	27.20	56	24.2	195.00	....	25
COHOES	23,234	49	25.35	22	44.8	140.00	1	1
TROY	65,000	138	25.40	27	20.0	150.00	2	3
West Troy	12,967	30	27.25	12	40.0	160.00	....	2
Green Island	4,463	10	25.00	4	40.0	300.00	....	1
Lansingburgh	10,550	28	30.00	7	25.0	.....	....	....
Hoosick Falls	7,014	13	22.15	4	30.0	75.00	1	....
Greenbush	7,462	22	.....	7	33.0	90.00	....	2
COXSACKIE	3,824	12	30.00	4	33.0	83.30	....	1
Catskill	4,920	9	21.60	1	10.0	.....	....	....
HUDSON	9,633	26	32.00	5	19.2	75.00	....	....
KINGSTON	21,500	31	17.36	4	13.0	130.00	2	....
Ellenville	3,000	6	24.00	3	50.0	330.00	....	....
Marbletown	3,689	5	17.00	2	33.0	330.00	....	....
Rosendale	6,125	14	27.00	4	28.5	71.25	....	....
Esopus	5,035	11	26.00	3	27.3	90.00	....	....
Saugerties	4,237	2	....	1	50.0	.....	....	....
POUGHKEEPSIE	23,200	76	39.25	31	40.8	225.00	1	4
Fishkill	11,726	15	15.50	2	13.3	.....	....	....
Wappinger Falls	3,718	7	22.50	4	57.0	285.00	....	....
NEWBURGH	24,596	33	16.00	10	30.0	30.00	....	1
Port Jervis	9,327	11	14.00	4	36.4	90.00	....	....
MIDDLETOWN	11,612	13	14.50	6	48.0	70.00	....	....
Warwick	6,000	10	20.00	4	40.0	.....	....	....

RK STATE BOARD OF HEALTH.

tricts, cities and towns, during March, 1895.

. For boundaries of *Sanitary Districts*, see Annual Summary.]

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	105	84	35	53	351	60	1332	776	58	402	441	526	533	156	284	133	1040
....	78	65	25	33	190	48	798	502	42	258	284	252	322	86	181	61	631
....	22	17	5	18	134	11	383	204	10	101	111	201	115	57	77	26	331
....	....	....	1	....	1	.....	10	5	1	3	3	5	6	....	3	2	6
....	....	1	....	....	4	.....	10	3	....	6	2	5	7	1	1	1	5
....	....	....	....	....	....	.....	5	1	....	2	3	3	4	1	1	2	4
....	....	....	1	1	....	.....	11	4	....	2	1	5	7	1	2	2	3
....	....	....	....	....	....	.....	1	1	....	.....	...	2	3	...	....	1	1
....	....	....	1	....	2	.....	8	3	....	5	3	2	4	1	1	2	3
....	....	....	....	....	1	.....	10	6	1	1	2	7	4	2	....	1	4
....	....	....	1	1	2	.....	6	.....	....	.....	1	1	2	....	....	1	3
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....	....	....	....	....	....	.....	1	1	....	.....	1	....	3	....	1	6	2
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....	....	....	....	....	....	.....	5	1	....	.....	....	1	1	....	....	1	1
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....	1	....	....	....	6	.....	17	7	....	5	3	4	12	....	1	2	13
....	....	....	1	....	1	.....	1	.....	1	1	2	4	2	....	1	2	5
....	....	....	....	....	....	.....	1	1	....	1	2	2	4	....	2	....	2
....	....	....	....	....	....	.....	7	4	....	1	3	1	3	....	....	2	1
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....	....	....	....	....	....	.....	4	.....	1	1	1	1	1	....	....	....	1
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....	....	....	....	....	....	.....	.....	1	1	.....	2	.....	3	....	....	....	2
....	3	....	....	....	5	1	34	23	....	9	7	20	19	2	6	17	14
....	10	2	4	14	19	42	263	128	11	79	67	103	153	34	27	93	137
....	2	1	....	....	2	13	31	27	3	6	10	15	43	6	8	2	35
....	....	....	....	....	....	4	8	6	1	6	2	2	5	....	1	2	10
....	1	....	2	1	5	7	35	21	....	5	9	5	13	8	3	10	8
....	1	....	....	....	....	2	3	3	....	1	1	2	3	....	3	2	2
....	1	....	....	....	....	1	3	1	....	1	....	....	....	....	1	1	....
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....	....	....	....	....	....	.....	7	....	....	2	1	5	2	....	....	1	2
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....	....	....	....	....	....	.....	6	2	....	1	1	1	1	....	....	1	2
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....	....	....	....	....	1	.....	2	1	....	1	....	2	1	....	....	....	3
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....	....	....	....	....	....	.....	2	2	....	....	....	1	2	....	....	2	1

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.— (*Cont'd*):								
Goshen	4,646	11	25.00	2	18.0	.....	....	....
Montgomery	5,259	6	13.68	2	33.0	.....	....	....
Haverstraw	7,714	7	12.00	3	42.0	142.80	....	....
Nyack	5,603	6	14.00	3	50.0	167.00	....	....
Ramapo	6,600	9	16.38	2	22.0	110.00	....	....
Rest of district	....	404	16.60	89	22.0	75.00	1	3
ADIRONDACK AND NORTHERN DISTRICT:								
Totals	.....	491	15.50	89	18.0	35.50	2	5
WATERTOWN	16,982	29	20.35	7	25.0	.....	....	....
Ellisburgh	4,223	5	14.20	0	.....	.....	....	....
Cape Vincent	3,000	5	20.00	1	20.0	.....	....	....
Clayton	4,250	6	16.80	2	33.0	166.60	....	....
OGDENSBURG	11,959	14	14 10	5	39.5	.....	....	....
Gouverneur	5,921	10	20.00	1	10.0	100.00	....	....
Potsdam	4,000	3	10.00	0	.....	.....	....	....
Canton	6,013	9	18.00	2	22.0	.....	....	....
Malone	5,000	15	30.00	3	20.0	.....	....	....
Plattsburgh	7,010	14	24.00	2	14.0	.....	....	....
Glens Falls	10,000	17	20.15	3	20.0	.....	....	....
Whitehall	4,434	3	10.00	2	60.0	600.00	....	1
FORT EDWARD	4,382	8	21.85	2	25.0	.....	..	....
Kingsbury	5,112	13	30.00	2	16.0	.....	....	....
Granville	5,281	8	18.15	3	37.5	.....	....	....
Salem	3,167	.....	.....	0	.....	.....	....	....
Greenwich	4,431	2	.....	1	50.0	.....	....	....
Rest of district	....	330	14.50	53	16.0	40.00	2	4
MOHAWK VALLEY DISTRICT:								
Totals	.....	538	17.25	97	18.5	70.00	2	6
SCHENECTADY	22,858	40	25.70	16	32.1	100.00	1	1
Cobleskill	3,436	9	25.00	0	.....	.....	....	....
AMSTERDAM	18,542	27	17.50	5	18.5	80.00	....	1
Fort Plain	3,000	2	10.00	0	.....	.....	....	....
Johnstown	7,768	9	12.86	0	.....	.....	....	....
GLOVERSVILLE	14,694	26	21.20	5	19.6	77.00	....	....
Little Falls	8,788	12	16.40	1	8.3	.....	....	....
Herkimer	5,150	10	23.30	1	10.0	100.00	....	....
Ilion	4,057	4	12.00	0	.....	.....	....	....
UTICA	46,608	71	18.30	16	23.0	142.75	....	....
Whitestown	5,225	8	18.40	0	.....	125.00	...	1
ROME	13,638	21	18.50	1	5.0	50.00	1	....
Boonville	3,512	3	11.00	1	33.0	.....	....	....
Camden	3,675	2	10.00	0	.....	.....	....	....
Waterford	5,522	15	30.00	2	13.3	133.00	....	1
Ballston Spa	3,527	8	25.00	2	25.0	.....	....	....
Mechanicville	3,000	8	30.00	2	22.0	... .	....	....
Saratoga Springs	12,000	28	28.00	5	17.8	142.35	....	....
Rest of District	.....	226	13.50	40	18.0	35.00	....	2
SOUTHERN TIER DISTRICT								
Totals	.....	509	15.25	90	17.6	55.70	1	4
BINGHAMTON	34,514	48	16.70	11	23.8	45.85	....	....
Owego	6,000	6	12.00	1	16.6	.....	....	....
Candor	3,525	6	20.40	0	.....	.....	....	....
Waverly	4,123	5	19.40	0	.....	.....	....	....
ELMIRA	30,000	52	20.80	9	18.5	120.00	....	2
Horseheads	3,319	1	.....	0	.....	.....	....	....

FOR MARCH — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	.....	2	1	....	1	2	1	.....	2	1	1	....
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3	....	4	.. .	1	8	8	2	93	30	3	28	21	46	48	11	9	50	35
....	....	3	....	....	2	2	3	103	51	8	23	23	45	63	12	10	83	53
....	....	....	....	....	....	....	.....	3	3	....	.....	2	2	3	....	2	7	7
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....	....	....	....	....	....	....	.....	6	1	....	1	....	1	2	....	1	1	2
....	....	....	....	....	....	....	.....	3	4	....	1	1	1	1	1	....	2	....
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....	....	....	....	....	....	....	.....	4	2	....	.....	....	1	1	....	....	4	1
....	....	....	....	....	....	....	.....	3	.....	....	.....	....	1	.....	....	....	2	2
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....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	2	....	....	.....	.....
....	....	3	....	....	2	....	2	75	26	7	19	15	30	50	8	7	56	24
2	....	4	....	1	3	14	4	101	62	4	37	45	51	59	17	14	64	48
....	....	....	....	....	....	....	3	12	9	....	1	1	7	5	1	....	2	6
....	....	....	....	....	....	....	.....	1	2	....	1	1	2	.....	....	1	1	....
....	....	1	....	....	....	....	.....	7	7	1	1	3	1	3	1	....	....	1
....	....	....	....	....	....	....	.....	.....	.....	....	.....	1	3	2	....	....	1	1
....	....	1	....	....	....	1	.....	3	2	....	6	4	.....	6	2	....	....	1
....	....	....	....	....	....	....	.....	1	5	....	1	....	1	1	....	1	1	1
....	....	....	....	....	....	1	.....	2	2	....	.....	....	2	1	1	1	....	....
....	....	....	....	....	....	....	.....	1	1	....	.....	....	1	1	....	....	....	....
2	....	....	....	....	....	8	.....	9	9	....	10	7	4	10	2	1	1	8
....	....	....	....	....	....	....	.....	.....	1	....	1	2	2	.....	....	....	1	....
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....	....	2	....	....	2	....	.....	1	2	....	.....	1	.....	.....	....	....	.....	4
....	....	....	....	1	1	4	.....	5	3	....	1	4	2	2	....	1	4	2
....	....	....	....	....	....	....	.....	52	14	2	14	19	23	19	7	7	45	16
2	....	1	1	3	3	9	4	135	36	1	29	20	42	61	18	14	86	39
1	....	....	....	....	....	1	.....	13	4	...	1	2	2	7	3	3	8	2
....	....	....	....	....	....	....	.....	2	.....	....	.....	....	.....	1	....	....	1	2
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....	....	....	....	....	....	3	1	9	3	....	4	2	7	6	3	1	5	6
....	....	....	....	....	....	....	.....	1	.....	....	.....	....	.....	.....	....	....	.....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
HORNELLSVILLE	11,898	14	15.00	1	7.0	.....	....	....
Bath	3,261	5	18.40	0	.....	.....	....	....
CORNING	10,025	14	16.80	2	14.2	70.00	....	....
Wallsville	5,033	4	10.00	0	.....	.....	....	....
OLEON	8,000	16	24.00	4	25.0	125.00	....	....
Salamanca	3,700	2	10.00	0	.....	.....	....	....
DUNKIRK	10,000	8	10 00	4	50.0	250.00	....	....
JAMESTOWN	18,627	25	16.10	10	40.0	40.00	1	....
Westfield	3,000	2	10.00	0	.....	.....	....	....
Fredonia	3,400	7	25.00	0	.....	.....	....	....
Rest of District	.....	294	14.50	48	16.0	50.00	....	2
EAST CENTRAL DISTRICT:								
Totals	.....	559	17.50	94	16.7	41.50	2	5
SYRACUSE	95,000	142	18.00	33	23.2	84.50	1	1
Baldwinsville	3,040	1	4.00	0	.....	.....	....	....
DeWitt	5,182	10	23.00	1	10.0	.....	....	....
Cortland	8,590	8	11.00	0	.....	.....	....	....
Homer	3,000	5	20.00	0	.....	.....	....	....
Oneida	6,083	12	23.75	2	16.7	83.30	....	....
Hamilton	4,110	7	20.44	3	42.8	.....	....	....
Cazenovia	3,803	6	18.94	0	.....	.....	....	....
Brookfield	3,235	4	14.56	0	.....	.....	....	....
Norwich	5,212	3	.....	0	.....	.....	....	....
Oneonta	6,776	7	13.00	0	.....	.....	....	....
Worcester	2,670	2	10.00	0	.....	.....	....	....
Cooperstown	3,000	4	16.00	1	25.0	.....	....	....
Walton	4,811	6	15.00	2	33.3	166.60	....	1
Delhi	3,000	4	16.00	0	.....	.....	....	....
Liberty	3,471	7	24.00	2	28.5	142.85	1	....
Rest of District	.....	331	17.20	50	15.0	24.25	1	3
WEST CENTRAL DISTRICT:								
Totals	.....	467	18.00	63	13.5	40.00	1	4
AUBURN	24,737	42	20.35	9	21.5	714.30	....	....
ITHACA	13,460	23	20.50	3	13.0	.....	....	....
Hector	4,832	6	15.00	0	.....	.....	....	....
Waterloo	4,350	9	24.00	2	22.0	.....	....	....
Seneca Falls	6,500	10	18.50	4	40.0	.....	....	....
Geneva	7,557	12	19.38	3	25.0	166.60	....	....
Canandaigua	5,868	11	22.50	4	36.5	90.00	....	....
Manchester	4,181	6	17.10	1	16.7	.....	....	....
Phelps	5,150	3	8.00	1	33.0	.....	....	....
Penn Yan	4,254	4	12.00	2	50.0	.....	....	....
Batavia	7,221	14	23.24	3	33.0	222.20	1	....
Dansville	3,758	9	28.00	1	11.0	.....	....	....
Le Roy	3,000	2	8.00	1	5.0	.....	....	....
Warsaw	4,700	3	10.00	1	33.0	.....	....	....
Rest of District	.....	313	18.00	28	9.0	35.00	....	4
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	1,148	17.50	277	24.5	86.50	5	18
BUFFALO	300,000	416	16.35	151	36.3	115.38	4	6
TONAWANDA	7,145	11	18.50	3	27.3	90.00	....	....
Amherst	3,960	5	15.00	1	20.0	.....	....	....
North Tonawanda	4,800	12	30.00	3	25.0	250.00	....	1
LOCKPORT	16,088	24	18.00	2	8.5	125.00	....	1
NIAGARA FALLS	16,000	20	15.00	4	20.0	100.00	....	2
Medina	4,500	9	24.00	1	11.0	.....	....	....
Albion	4,536	10	25.00	5	50.0	100.00	....	....

FOR MARCH — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	.....	25	.....	....	.....	2	1	3	2	1	....	....
....	....	....	....	....	....	....	.....	...	.....	....	1	...	1	.....	....	....	1	....
1	....	....	....	....	....	....	.....	4	1	....	.....	1	2	.....	....	....	1	4
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....	....	....	....	....	2	....	.....	4	2	....	2	....	2	1	....	....	3	....
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....	....	....	....	....	....	2	.....	2	2	..	...	...	.....	.....	....	....	....	2
....	....	....	....	....	....	....	1	4	2	....	3	2	3	2	....	....	1	2
....	....	....	....	....	....	....	.....	...	.....	....	.....	.....	.....	.....	1	....	1	....
....	....	1	1	3	1	3	2	86	21	1	17	11	18	36	9	8	60	14
1	....	4	....	2	1	5	2	136	50	1	37	33	55	65	22	15	78	44
....	....	4	....	....	1	4	1	21	20	1	8	9	10	21	5	4	15	16
....	....	....	....	....	....	....	.....	...	.....	....	.....	1	.....	.....	....	....	....	....
....	....	....	....	....	....	....	.....	3	.....	....	1	2	.....	.....	1	....	2	1
....	....	....	....	....	....	....	.....	...	3	....	.....	...	2	2	1	....	....	....
....	....	....	....	1	....	....	.....	1	.....	....	.....	....	1	1	....	....	2	....
....	....	....	....	....	....	....	.....	2	2	....	.....	....	2	.....	2	1	2	....
....	....	....	....	....	....	....	.....	2	.....	....	1	....	1	1	....	....	....	2
....	....	....	....	....	....	....	.....	...	1	....	3	....	.....	.....	....	2	....	....
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....	....	....	....	....	....	....	.....	...	2	....	.....	....	.....	.....	....	....	....	....
....	....	....	....	....	....	....	.....	...	2	....	.....	....	1	.....	....	....	....	1
....	....	....	....	....	....	....	.....	1	.....	....	.....	....	1	1	....	1	1	....
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1	....	....	....	1	....	1	1	2	1	....	.....	...	1	1	....	....	1	....
....	....	....	1	2	1	4	5	86	46	3	24	25	56	69	16	22	64	38
....	....	....	....	1	....	1	1	11	6	....	.....	2	4	4	2	1	2	7
....	....	....	....	....	....	....	.....	5	.....	....	4	3	3	2	....	3	2	1
....	....	....	....	....	....	....	.....	...	.....	....	1	....	2	1	....	....	....	....
....	....	....	....	....	....	....	.....	2	.....	1	.....	....	.....	1	1	....	2	2
....	....	....	....	....	....	....	.....	3	1	....	.....	....	.....	.....	....	1	2	3
....	....	....	....	....	....	....	2	4	1	....	.....	....	2	1	1	1	....	....
....	....	....	....	....	....	....	1	2	.....	....	.....	1	1	2	1	...	1	2
....	....	....	....	....	....	....	.....	...	.....	....	1	1	1	.....	....	....	2	1
....	....	....	....	....	....	....	.....	1	1	....	.....	....	.....	.....	....	....	....	1
....	....	....	....	....	....	....	.....	...	.....	....	1	....	.....	1	....	1	....	1
....	....	....	....	....	....	....	.....	1	2	....	1	....	1	2	....	2	2	1
....	....	....	....	....	....	....	.....	...	1	....	.....	....	.....	1	1	1	2	2
....	....	....	....	....	....	....	.....	...	.....	....	1	1	.....	.....	....	....	....	....
....	....	....	....	....	....	....	.....	...	1	....	1	....	.....	1	....	....	....	....
....	....	....	....	1	1	3	1	57	33	2	14	17	41	53	10	12	47	17
2	....	4	11	4	6	41	17	239	125	18	60	67	93	157	37	31	113	100
....	....	2	10	1	3	22	8	104	36	8	19	18	27	60	14	16	21	37
....	....	....	....	....	....	1	.....	4	1	....	1	1	.....	.....	1	....	1	1
....	....	....	....	....	....	....	.....	1	1	....	.....	....	3	.....	....	....	....	....
....	....	....	....	....	....	1	1	1	1	....	2	....	.....	.....	....	....	3	2
....	....	....	....	....	....	2	.....	4	1	....	2	1	4	1	1	....	....	7
....	....	....	....	....	....	....	.....	4	4	....	.....	....	1	3	....	....	2	4
....	....	....	....	....	....	....	.....	3	1	....	1	1	1	1	....	....	1	....
....	....	....	....	....	....	....	1	.....	1	....	1	3	1	1	....	1	....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Cont'd*):								
Brockport	3,742	3	12.00	0	.....	.....	....	....
ROCHESTER	150,000	210	16.80	36	17.0	80.00	....	1
Palmyra	4,173	9	23.80	1	11.0	110.00	....	....
Newark	3,000	7	28.00	0	.....	.....	....	....
Lyons	6,127	16	30.00	4	25.0	125.00	....	1
Clyde	3,000	8	30.00	1	12.5	.... ..	....	....
OSWEGO	21,966	36	19.60	10	27.7	83.50	....	....
Fulton	4,214	8	22.80	2	25.0	.....	....	....
Richland	3,637	2	.....	0	.....	.... ..	1	....
Rest of District	.....	342	18.00	53	15.5	53.00	....	6
Totals for the State	.....	11,379	20.00	3,340	29.4	98.00	53	99
Average for March for past 10 years	.....	9,578	.....	2,870	30.0	138.65	57	88
Totals for February, 1895	....	10,771	21.55	3,049	28.3	85.40	40	99

REMARKS.—The average daily mortality for the month was 367, the estimated death rate of which month was 384, and the annual mortality per 1,000 population, 21.55. Compared epidemic of grippe, which commenced in January, has continued through March, showing which were 2,395, as well as all other local diseases, and also in the mortality among the aged. March, 1894, being 1,300; at the same time the deaths from communicable diseases are less during the month, and a total for the present epidemic during the three months of 4,500, there was an increase over the month preceding of 200 deaths, showing itself in diphtheria, in cerebro-spinal meningitis. Diphtheria caused 50 more deaths than in February, and 100 true of scarlet fever, from which there were only 26 deaths, of the 131, outside of that district. caused double the mortality of February. Whooping cough and typhoid fever show no the average for this month, nearly half of these being reported from the Hudson valley month; in March, 1894, there were 47 deaths from it. Consumption caused 1,274 deaths. the prevailing grippe epidemic. The weather during the month was generally fair, with

'OR MARCH — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	....	.....	1	1	....	.....	....	.....	.....	....	....	....	1
1	....	1	....	1	2	9	2	36	30	4	8	21	16	36	7	8	18	9
...	....	....	....	1	....	....	.....	1	1	....	.....	....	.....	2	....	....	3	1
...	....	....	....	....	.....	....	.....	.....	1	....	.....	1	1	3	....	1	....	....
...	....	....	....	....	1	....	.....	3	.....	....	1	1	.....	1	....	.. ..	4	3
...	....	....	....	....	....	....	.....	1	1	...	.....	...	.....	2	...	....	1	3
...	....	....	....	....	....	1	2	5	6	1	2	1	3	5	3	1	4	2
...	....	....	....	....	..	....	.....	1	2	2	.....	....	1	.....	....	....	1	1
...	....	....	....	....	....	....	.....	.....	.....	...	.....	....	.....	.....	....	....	1	...
1	....	1	1	1	....	5	3	70	37	3	23	18	35	42	11	4	53	98
23	....	131	99	51	83	445	137	2,395	1,274	104	691	721	971	1,160	312	417	714	1499
48	15	194	116	48	97	503	162	1,944	1,159	116	500	507	667	1,052	232	283	659	1107
9	5	98	44	38	87	391	107	2,526	1,161	93	600	670	917	1,035	281	351	598	1621

ber 1,000 population annually being 20.00; this is less than that of February, the daily deaths with March, 1894, there were 1,180 more deaths, and the death rate then was 18.50. The itself in the increased mortality from acute respiratory diseases, the reported deaths from which was unusually large, the total increase over the mortality from these causes over by 300 — it may be estimated that there were 1,500 deaths from epidemic influenza (grippe) From common zymotic diseases, although their total mortality is much less than a year ago, diarrhœal diseases, scarlet fever and measles; there was also a slight (customary) increase ess than in March, 1894; the increase was confined to the maritime district. The same is Measles, also, from which there were 100 deaths, of which all but 15 occurred in the metropolis, change; there were about 100 deaths in the State from typhoid fever, which is rather below district. Smallpox, for the first time since November, 1891, caused no death during the which is not above the average for this month, although it has been somewhat increased by small rainfall and low temperature, the prevailing wind being westerly.

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics*, and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	6,365	21.60	2,362	36.8	134.50	55	2
NEW YORK CITY	1,995,000	3,820	22.90	1,503	39.3	190.30	44	1
BROOKLYN	1,086,000	1,881	21.00	677	36.0	138.25	10	9
LONG ISLAND CITY	35,745	74	22.75	33	44.5	148.65	....	....
Newtown	19,776	33	20.00	12	35.3	181.80	....	1
Oyster Bay	14,887	15	12.50	3	20.0	.....	....	....
Hempstead	23,991	38	19.00	11	29.0	26.30	....	....
North Hempstead	8,726	12	16.56	3	25.0	.....	....	....
Jamaica	17,654	28	19.00	10	35.7	.....	....	....
Flushing	20,816	32	18.46	7	21.8	62.50	....	....
Southold	7,671	9	14.00	1	11.0	.....	....	....
Sag Harbor	3,000	5	20.00	0	.....	.....	....	....
Huntington	8,253	17	24.00	2	12.0	.....	....	....
Brookhaven	13,493	4	.....	1	.....	.....	....	....
New Brighton	17,261	29	20.30	9	31.3	68.75	1	1
Edgewater	15,000	20	16.00	3	15.0	100.00	....	....
Port Richmond	6,390	11	20.60	2	18.2	90.00	....	....
Westfield	8,648	6	.....	2	.....	.....	....	....
YONKERS	35,000	49	16.80	19	40.0	183.50	....	....
Westchester	8,326	23	30.00	5	24.8	147.50	....	....
Greenburgh	11,630	16	17.00	5	31.2	.....	....	....
MOUNT VERNON	15,513	25	19.25	8	32.0	200.00	....	....
Port Chester	5,274	6	13.00	3	50.0	.....	....	....
Sing Sing	9,352	11	14.10	1	9.0	90.00	....	1
New Rochelle	8,217	13	18.85	4	30.8	77.00	....	....
Peekskill	9,676	16	18.80	2	12.5	62.50	....	....
White Plains	4,042	11	30.00	3	27.3	90.00	....	....
Rest of District	.....	161	19.00	33	20.5	75.00	....	....
HUDSON VALLEY DISTRICT: Totals	.....	1,135	19.60	274	24.0	129.50	5	4
ALBANY	100,000	223	26.75	53	23.8	201.80	2	2
COHOES	23,234	52	26.85	21	40.4	175.00	....	3
TROY	65,000	112	20.72	22	19.6	115.00	....	1
West Troy	12,967	27	24.90	11	40.7	74.00	....	....
Green Island	4,463	9	24.20	3	33.3	222.20	1	....
Lansingburgh	10,550	22	25.00	5	22.5	45.45	....	....
Hoosick Falls	7,014	8	14.60	1	12.5	125.00	1	....
Greenbush	7,462	14	23.00	3	21.4	.....	....	....
COXSACKIE	3,824	10	27.50	1	10.0	200.00	....	2
Catskill	4,920	8	19.44	2	25.0	250.00	....	....
HUDSON	9,033	15	18.75	4	26.7	66.70	....	....
KINGSTON	21,500	40	22.40	14	35.0	72.50	....	....
Ellenville	3,000	5	20.00	1	20.0	200.00	....	....
Marbletown	3,689	5	16.50	1	20.0	.....	....	....
Rosendale	6,125	9	17.65	3	33.3	220.00	....	....
Esopus	5,035	5	12.00	0	.....	.....	....	....
Saugerties	4,237	6	.....	1	.....	.....	1	....
POUGHKEEPSIE	23,200	73	36.00	13	17.7	137.00	....	2
Fishkill	11,726	18	19.00	3	16.7	111.10	....	....
Wappinger Falls	3,718	8	25.75	5	62.5	250.00	....	1
NEWBURGH	24,536	33	16.00	6	18.5	62.50	....	1
Port Jervis	9,327	14	18.00	4	28.5	.....	....	....
MIDDLETOWN	11,612	19	20.00	2	10.5	105.00	....	1
Warwick	6,000	12	24.00	5	41.7	.....	....	....
Goshen	4,646	8	20.64	3	37.5	125.50	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns during April, 1895.

type. For boundaries of *Sanitary Districts* see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
21	....	83	107	33	71	358	108	1,412	725	46	380	419	499	487	137	278	123	1007
8	....	59	85	20	48	187	71	843	458	35	230	257	255	322	86	187	51	585
12	....	20	20	12	20	137	20	415	195	5	110	134	205	85	35	68	39	335
....	....	1	2	....	1	5	2	17	7	....	2	2	6	12	1	4	2	10
....	....	....	....	....	....	4	1	5	.....	....	5	....	7	2	2	....	1	5
....	....	....	....	....	....	....	.....	6	1	....	1	1	1	2	....	....	1	2
....	....	1	....	....	....	....	.....	9	3	3	....	3	1	8	....	1	2	7
....	....	....	....	....	....	....	.....	5	1	....	1	1	1	2	....	....	....	1
....	....	....	....	....	....	....	.....	8	3	....	4	....	1	1	3	....	1	7
....	....	1	....	....	....	1	.....	6	5	....	.....	1	4	8	1	1	3	1
....	....	....	....	....	....	....	.....	4	1	1	.....	....	2	.....	....	....	....	1
....	....	....	....	....	....	....	.....	1	.....	....	1	....	2	.....	....	....	1	....
....	....	....	....	....	....	....	.....	6	.....	....	.....	1	4	2	....	....	2	2
....	....	....	....	....	....	....	.....	2	1	....	.....	....	....	.....	....	....	1	....
....	....	....	....	....	....	....	.....	6	6	....	3	2	2	2	....	1	....	5
1	....	1	....	....	....	....	.....	4	1	....	3	....	2	3	....	1	2	2
....	....	....	....	....	....	....	1	1	1	....	.....	2	3	.....	1	....	....	2
....	....	....	....	....	....	....	1	2	1	1	.....	....	....	.....	....	....	1	....
....	....	....	....	....	....	9	.....	9	3	....	3	3	4	7	1	1	....	9
....	....	....	....	....	....	4	1	6	....	....	1	2	1	.....	....	3	2	3
....	....	....	....	....	....	....	.....	2	2	....	2	1	.....	5	1	1	....	2
....	....	....	....	1	1	3	.....	8	1	....	1	1	2	1	....	2	3	1
....	....	....	....	....	....	....	.....	1	.....	....	.....	....	2	2	....	....	....	1
....	....	....	....	....	....	....	.....	1	4	....	.....	....	1	1	2	....	....	1
....	....	....	....	....	....	1	.....	1	.....	....	1	2	2	1	....	1	....	4
....	....	....	....	....	....	1	.....	2	3	....	2	....	2	1	1	1	1	2
....	....	....	....	....	....	....	1	2	2	....	.....	1	2	1	....	....	....	2
....	....	....	....	....	1	6	5	35	26	1	10	5	17	19	3	6	10	17
3	....	16	....	11	16	30	20	211	135	8	69	62	91	147	30	38	71	125
....	....	2	....	....	....	3	11	25	40	1	12	17	14	35	6	4	....	24
....	....	....	....	....	2	....	2	7	7	1	4	....	3	9	1	....	....	11
....	....	3	....	2	....	6	1	33	18	....	5	2	10	11	7	3	3	7
....	....	1	....	....	....	1	.....	8	2	....	1	....	4	4	....	1	....	5
....	....	....	....	....	1	....	.....	.....	1	....	.....	1	1	1	1	....	....	2
....	....	1	....	....	....	....	.....	1	5	1	2	1	1	.....	2	..	6	2
....	....	....	....	....	....	....	.....	2	.....	....	1	1	1	.....	....	1	1	....
....	....	....	....	....	....	....	.....	4	1	....	1	....	2	1	1	2	1	1
....	....	....	....	....	....	....	.....	1	2	1	.....	1	.....	.....	....	....	2	1
....	....	....	....	....	....	1	1	1	.....	....	1	....	.....	.....	....	....	2	2
....	....	....	....	....	....	....	1	2	1	....	2	....	2	1	....	2	1	3
....	....	....	....	....	2	....	1	11	8	1	5	2	3	2	1	3	1	....
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3	....	1	....	1	....	2	1	7	8	....	10	8	2	12	1	2	8	5
....	....	....	....	....	1	1	.....	5	.....	....	1	1	1	3	....	1	2	2
....	....	....	....	....	....	1	.....	1	.....	....	1	1	2	....	1	....	....	....
....	....	....	....	1	....	....	.....	3	1	....	1	2	5	6	1	2	3	7
....	....	....	....	....	....	....	.....	2	1	....	2	2	2	1	....	1	1	2
....	....	....	....	....	....	1	.....	2	1	....	1	1	1	3	1	3	2	2
....	....	....	....	....	....	....	.....	5	.....	....	1	....	.....	1	....	....	1	4
....	....	....	....	....	....	1	.....	3	.....	....	.....	....	.....	2	....	1	1	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Montgomery	5,259	3	.....	0	.....	.....	....	....
Haverstraw	7,714	10	15.60	5	50.0	100.00	....	....
Nyack	5,603	5	12.00	4	80.0	600.00	....	....
Ramapo	6,600	12	21.84	6	50.0	83.30	....	....
Rest of District	.....	350	15.00	72	20.0	110.00	1	6
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	396	13.00	72	18.3	62.63	2	11
WATERTOWN	16,982	34	25.00	10	29.4	117.65	....	4
Ellisburgh	4,223	4	11.00	1	25.0	.....	....	....
Cape Vincent	3,000	1	.....	0	.....	.....	....	....
Clayton	4,250	2	.....	0	.....	.....	....	....
OGDENSBURG	11,959	13	13.20	2	15.2	75.00	....	1
Gouverneur	5,921	.....	.....	0	.....	.....	....	....
Potsdam	4,000	6	.....	2	.....	.....	....	....
Canton	6,013	6	12.00	1	16.7	.....	....	....
Malone	5,000	4	10.00	2	50.0	.....	....	....
Plattsburgh	7,010	12	20.00	2	16.7	.....	....	....
Glens Falls	10,000	9	.....	2	.....	.....	....	....
Whitehall	4,434	1	.....	1	.....	.....	....	....
Fort Edward	4,382	7	19.10	0	.....	.....	....	....
Kingsbury	5,112	8	18.80	2	25.0	125.00	....	1
Granville	5,281	6	13.62	1	16.7	.....	....	....
Salem	3,167	.....	.....	0	.....	.....	....	....
Greenwich	4,431	6	16.26	0	.....	.....	....	....
Rest of District	.....	277	12.16	46	16.6	62.50	2	4
MOHAWK VALLEY DISTRICT:								
Totals	.....	475	15.35	83	17.5	54.50	3	5
SCHENECTADY	22,858	36	19.00	11	30.6	166.60	1	1
Cobleskill	3,436	11	.....	1	10.0	.....	....	....
AMSTERDAM	18,542	22	.....	7	.....	.....	....	1
Fort Plain	3,000	5	21.00	0	.....	.....	....	....
Johnstown	7,768	8	....	2	.....	.....	....	....
GLOVERSVILLE	14,694	19	15.50	2	10.5	52.50	....	1
Little Falls	8,783	24	30.00	2	8.3	.....	....	....
Herkimer	5,150	7	17.00	0	.....	.....	....	....
Ilion	4,057	4	12.00	0	.....	.....	....	....
UTICA	46,608	56	14.50	15	26.8	20.00	....	....
Whitestown	5,225	5	12.00	1	20.0	.....	....	....
ROME	13,638	17	15.00	1	6.5	.....	....	....
Boonville	3,512	3	11.00	0	.....	.....	1	....
Camden	3,675	8	24.00	0	.....	.....	....	....
Waterford	5,522	9	19.56	3	33.3	.....	....	....
Ballston Spa	3,527	4	13.00	1	25.0	250.00	....	....
Mechanicville	3,000	2	10.00	0	.....	.....	....	....
Saratoga Springs	12,000	29	29.00	7	23.0	167.00	....	1
Rest of District	.....	206	13.00	30	15.0	45.00	1	1
SOUTHERN TIER DISTRICT:								
Totals	.....	384	12.00	57	15.0	75.00	3	5
BINGHAMTON	34,514	42	14.60	2	5.0	25.00	....	1
Owego	6,000	7	14.00	0	.....	.....	....	....
Candor	3,525	5	17.00	0	.....	.....	....	....
Waverly	4,123	1	.....	0	.....	.....	....	....
ELMIRA	30,000	36	14.40	6	16.7	139.10	....	....
Horseheads	3,319	2	8.00	0	.....	.....	....	....
HORNELLSVILLE	11,898	15	15.50	3	20.0	133.30	....	....
Bath	3,261	4	14.72	1	25.0	.....	....	....

APRIL — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	.....	12	.....	....	.....	....	.....	1	....	....	....	....
....	1	....	....	....	....	.....	12	.....	....	1	1	2	2	....	....	....	1
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....	7	....	6	5	12	1	77	36	3	16	21	26	46	6	12	33	36
....	3	....	....	1	5	3	59	62	5	31	15	36	41	16	12	51	42
....	....	....	....	....	....	.....	4	6	....	1	1	3	2	1	1	3	8
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....	....	....	....	....	....	.....	.....	5	....	.....	....	.....	2	2	....	3	....
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....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	1	1	....	1
....	3	....	....	1	4	3	46	39	5	24	10	25	31	11	8	38	23
....	2	....	4	4	4	4	91	53	3	28	32	54	64	12	15	50	47
....	....	....	....	1	....	3	5	4	1	2	2	1	9	1	2	1	2
....	....	....	....	....	....	.....	3	1	....	.....	1	2	1	1	....	2	....
....	....	....	....	....	....	1	5	3	....	1	....	2	4	1	....	....	4
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....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	.....	....	2	2	2
....	....	....	....	....	....	.....	3	1	....	1	1	5	1	1	....	1	4
....	....	....	....	....	....	.....	4	2	....	2	2	3	1	2	2	6	....
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....	....	....	....	....	....	.....	2	3	....	1	1	1	2	2	1	2	2
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....	2	....	....	2	....	.....	6	5	....	1	2	.....	2	1	....	2	5
....	....	....	2	1	4	.....	47	25	1	11	17	19	27	3	4	27	16
....	3	1	2	2	6	5	56	37	4	27	22	43	47	18	16	49	37
....	....	....	....	....	....	.....	7	5	....	3	4	3	6	6	1	5	1
....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	2	....	....	3	1
....	....	....	....	....	....	.....	.....	1	1	.....	....	.....	1	....	....	1	1
....	....	....	....	....	....	.....	.....	.....	....	.....	1	.....	.....	....	....	....	....
....	....	....	1	....	1	3	7	6	....	2	2	2	4	1	2	1	4
....	....	....	....	....	....	.....	.....	.....	....	.....	....	2	.....	....	....	....	....
....	....	....	....	1	1	.....	1	.....	1	.....	2	4	.....	2	....	2	1
....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	2	....	....	2	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.
SOUTHERN TIER DIST.—(*Cont'd*).							
CORNING	10,025	9	11.00	3	33.3	222.20	
Wellsville	5,033	.....	.....	.....	.....	.....	
OLEAN	8,000	7	11.00	1	14.3	285.00	
Salamanca	3,700	6	19.40	1	16.7	.....	
DUNKIRK	10,000	6	8.00	1	16.7	.....	
JAMESTOWN	18,627	22	.....	6	.....	.....	
Westfield	3,000	.....	.....	.....	.....	.....	
Fredonia	3,400	4	14.12	0	.....	250.00	
Rest of District	.....	224	12.25	34	15.2	58.00	
EAST CENTRAL DISTRICT:							
Totals	.....	486	15.30	83	17.2	41.20	
SYRACUSE	95,000	132	16.70	34	25.7	60.60	
Baldwinsville	3,040	4	16.00	1	25.0	200.00	
DeWitt	7,182	5	12.00	1	20.0	200.00	
Cortland	8,590	11	.....	2	.....	.....	
Homer	3,000	3	12.00	0	.....	.....	
Oneida	6,083	8	.....	1	.....	.....	
Hamilton	4,110	9	24.00	1	10 0	.....	
Cazenovia	3,803	5	16.00	1	20.0	.....	
Brookfield	3,235	7	24.00	1	14.3	.....	
Norwich	5,212	7	16.10	1	12.8	.....	
Oneonta	6,776	8	16.30	1	12.5	.....	
Worcester	2,670	1	.....	0	.....	.....	
Cooperstown	3,000	2	8.00	0	.....	.....	
Walton	4,811	3	.....	0	.....	.....	
Delhi	3,000	3	12.00	0	.....	330.00	
Liberty	3,471	1	.....	0	.....	.....	
Rest of District	.....	277	15.00	40	14.3	31.20	
WEST CENTRAL DISTRICT:							
Totals	.....	351	14.00	35	10.0	43.00	
AUBURN	24,737	50	24.00	5	10.0	20.00	
ITHACA	13,460	7	.....	0	.....	.....	
Hector	4,832	4	10.00	1	25.0	250.00	
Waterloo	4,350	5	14.00	0	.....	200.00	
Seneca Falls	6,500	8	14.80	1	12.5	.....	
Geneva	7,557	13	19.00	0	.....	.....	
Canandaigua	5,868	11	22.48	2	18.2	.....	
Manchester	4,181	3	10.00	0	.....	.....	
Phelps	5,150	5	.....	1	.....	.....	
Penn Yan	4,254	3	9.00	0	.....	.....	
Batavia	7,221	10	16.60	5	50.0	100.00	
Dansville	3,758	6	19.00	0	.....	.....	
Le Roy	3,000	5	20.00	0	.....	.....	
Warsaw	4,700	4	11.00	0	.....	.....	
Rest of District	.....	217	13.00	20	9.2	54.50	
LAKE ONTARIO AND WESTERN DISTRICT:							
Totals	.....	953	15.25	240	25.2	103.15	
BUFFALO	300,000	351	14.00	135	38.5	168.50	
TONAWANDA	7,145	7	12.00	3	42.8	142.85	
Amherst	3,960	4	12.50	2	50.0	.....	
North Tonawanda	4,800	7	17.50	2	28.5	142.85	
LOCKPORT	16,088	18	13.15	4	22.2	110.00	
NIAGARA FALLS	16,000	16	12.00	5	31.2	125.00	
Medina	4,500	4	11.00	0	.....	.....	
Albion	4,536	8	20.75	3	37.5	.....	

APRIL — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	1	....	....	.....	.....	.....	....	2	....	1	1	....	1	....	2
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...	...	....	....	....	....	.....	4	2	1	1	2	1	2	1	1	....	5
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...	3	1	....	1	2	2	33	19	1	20	10	30	25	8	11	34	20
...	5	....	4	2	1	1	86	48	6	50	33	43	50	30	23	43	54
...	4	....	1	1	1	.....	14	18	2	18	9	9	17	9	5	6	17
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...	....	....	3	1	....	.....	62	22	3	27	21	21	27	17	13	26	29
...	1	1	2	1	....	2	59	44	2	25	16	56	42	9	13	41	27
...	....	....	....	....	....	.....	8	7	1	5	1	6	4	2	3	4	8
...	....	....	....	....	....	.....	2	1	....	.....	....	1	2	....	....	1	....
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...	1	....	2	....	....	2	39	26	1	14	9	39	25	6	7	25	14
...	5	24	6	10	20	13	161	116	9	56	54	95	139	30	43	66	86
...	4	23	4	5	11	5	65	37	3	19	15	31	55	11	13	13	30
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...	....	....	....	....	....	1	2	3	1	.....	1	2	1	....	2	....	2
...	....	....	....	....	....	.....	1	.....	....	.....	2	.....	.....	..	1	1	....
...	....	....	....	....	....	.....	2	.....	....	.....	1	2	1	1	....	1	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*).								
Brockport	3,742	2	.....	0	.....	.....	....	....
ROCHESTER	150,000	220	17.30	33	15.0	68.20	....	5
Palmyra	4,173	3	.....	0	.....	.....	....	....
Newark	3,000	5	20.00	1	20.0	200.00	....	1
Lyons	6,127	15	24.00	0	.....	.....	....	....
Clyde	3,000	7	28.00	2	28.5	.....	....	....
OSWEGO	21,966	27	14.75	4	14.8	.....	....	....
Fulton	4,214	7	20.00	1	14.2	285.00	....	....
Richland	3,637	1	.....	1	.....	.....	....	....
Rest of District	.....	251	13.10	44	17.6	52.00	1	1
Totals for the State	.....	10,545	19.70	3,506	33.3	115.70	78	115
Average for Apr. for past 10 years	.....	9,524	.....	2,895	30.4	129.15	62	77
Totals for March, 1895	.....	11,379	20.00	3,340	29.4	98.00	53	91

REMARKS.—Compared with the month preceding, there was a falling off in the total reported months of the year, to one of 351. The estimated death rate per 1,000 population annually the months preceding has been in deaths from acute respiratory diseases, diseases of the eases of the respiratory system; in January about 23, in February 24, and in March 21 per of all the deaths in February to one-fifth. Diseases of the nervous system are reported as preceding. Old age caused 200 fewer deaths than in March, and 100 less than in February, tion, which caused 1,200 deaths, or 41 deaths daily, which has been the daily average for each the mortality of which was relatively the average of that for April for ten years past, there diseases, the mortality from communicable diseases being 100 less; at that time the epidemic undisturbed ratio of diseases has been reached: it may be estimated that the present epidemic, during the entire epidemic. Ordinary zymotic diseases, caused 1,220 deaths (exactly the This is higher than at any time during the year, 100 more than in March, and 200 more than in one-half of the deaths occurring in the Hudson Valley district), measles and whooping cough. Diphtheria has decreased a little, and is less fatal than a year ago, 353 of the 424 deaths being age, which is excessive for April. There were no deaths from smallpox; the disease devel

OR APRIL — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	....	.....	1	.....	....	.....	.....	.....	.....	1	....	....	....
2	....	1	....	1	3	2	3	32	26	4	20	16	16	38	7	12	15	17
...	....	....	....	....	....	....	.....	.....	.....	....	.....	....	....	.....	...	1	2	....
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...	...	....	....	....	....	....	.....	2	6	1	4	....	5	4	1	....	1	3
...	....	....	....	1	....	1	.....	1	.....	....	.....	1	2	.....	....	1	....	....
...	....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	....	....	1
...	....	....	....	....	2	6	1	47	27	....	9	15	33	29	9	9	31	28
2	....	118	133	62	107	424	151	2,135	1,220	83	666	653	917	1,017	282	433	494	1425
4	15	198	129	47	87	446	115	1,992	1,173	100	520	504	659	1,059	320	334	613	1110
3	....	131	98	51	83	445	137	2,395	1,274	104	691	721	971	1,160	312	417	714	1499

ortality from a daily average of 367, which was also the daily average for the first three as 19.70, against 20.00 in March, 21.55 in February, and 20.18 in January. The decrease from rvous system and old age. About 20 per cent. of the total mortality was from acute dis- nt. of the deaths were from this cause, the mortality having fallen from nearly one-fourth aving caused 150 fewer deaths than in March, and fewer than in any of the three months other local diseases there is little variation in the mortality. The same is true of consump- the past four months uniformly. Compared with the corresponding month of last year, ere 600 more deaths, this increase being entirely in diseases of the lungs and other l cal grippe, which had commenced in the preceding December, had come to an end, and an mmencing in January, caused about 600 deaths during this month, or about 5,000 deaths me number as from consumption) or about one-ninth of the total mortality for the month. anuary and February. The increase is in cerebro-spinal meningitis, typhoid fever (nearly oth of which latter have steadily increased during the year, chiefly in the maritime district. eported from the maritime district. One-third of the deaths occurred under five years of ped May 1, in the town of Northfield, where ten cases have thus far occurred.

MONTHLY BULLETIN OF THE

Abstract of reports of deaths and causes in the follo

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in R

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.
MARITIME DISTRICT: Totals	.....	5,676	19.75	2,130	37.5	135.70	
NEW YORK CITY	1,995,000	3,479	20.53	1,444	41.6	150.85	
BROOKLYN	1,086,000	1,696	18.38	566	33.3	126.35	
LONG ISLAND CITY	35,745	.....	.....	.....	.....	.....	
Newtown	19,776	48	29.00	27	56.0	186.65	
Oyster Bay	14,887	20	16.10	3	15.0	50.00	
Hempstead	23,991	36	18.20	9	25.0	27.75	
North Hempstead	8,726	10	13.80	2	20.0	100.00	
Jamaica	17,654	33	22.44	9	27.3	30.30	
Flushing	20,816	34	19.60	10	29.4	90.00	
Southold	7,761	10	15.60	2	20.0	.....	
Sag Harbor	3,000	6	24.00	0	.....	.....	
Huntington	8,253	11	16.00	3	27.3	.....	
Brookhaven	13,493	19	17.10	3	15.0	100.00	
New Brighton	17,261	31	21.70	4	13.0	160.00	
Edgewater	15,000	16	13.00	2	12.5	125.00	
Port Richmond	6,390	9	16.88	0	.....	.....	
Westfield	8,648	.....	.....	.....	.....	.....	
YONKERS	35,000	.....	.....	.....	.....	.....	
Westchester	8,326	21	24.00	3	16.7	110.00	
Greenburgh	11,630	10	11.00	4	40.0	.....	
MOUNT VERNON	15,513	25	19.25	7	28.0	40.00	
Port Chester	5,274	8	17.00	2	25.0	250.00	
Sing Sing	9,352	15	19.25	6	40.0	.....	
New Rochelle	8,217	8	12.00	2	25.0	.....	
Peekskill	9,676	11	14.00	2	18.2	.....	
White Plains	4,042	6	18.00	2	33.3	.....	
Rest of District	.....	114	13.68	18	17.0	50.00	
HUDSON VALLEY DISTRICT: Totals	.....	967	17.00	191	20.0	110.65	
ALBANY	100,000	188	22.93	39	20.8	122.35	
COHOES	23,234	33	17.00	11	33.3	121.20	
TROY	65,000	109	20.16	13	12.0	136.60	
West Troy	12,967	28	25.80	5	18.0	250.00	
Green Island	4,463	7	16.25	3	50.0	166.60	
Lansingburgh	10,550	18	14.80	4	30.0	.....	
Hoosick Falls	7,014	5	10.00	0	.....	200.00	
Greenbush	7,462	9	14.80	3	33.3	110.00	
Coxsackie	3,824	7	22.26	1	14.5	.....	
Catskill	4,920	7	17.00	1	14.2	285.00	
HUDSON	9,633	11	13.65	2	18.2	90.90	
KINGSTON	21,500	38	21.28	13	34.2	184.20	
Ellenville	3,000	3	12.00	0	.....	.....	
Marbletown	3,689	3	10.00	1	33.0	.....	
Rosendale	6,125	8	15.50	1	12.5	.....	
Esopus	5,035	8	19.00	2	25.0	.....	
Saugerties	4,237	6	17.00	3	50.0	.....	
POUGHKEEPSIE	23,200	32	16.55	4	12.5	62.50	
Fishkill	11,726	14	14.35	3	21.4	.....	
Wappinger Falls	3,718	4	12.88	0	.....	.....	
NEWBURGH	24,536	42	20.25	3	7.5	166.60	
Port Jervis	9,327	12	15.36	3	25.0	85.00	
MIDDLETOWN	11,612	20	20.10	5	25.0	100.00	
Warwick	6,000	11	22.00	3	27.3	.....	
Goshen	4,646	15	.....	4	29.0	.....	

ɛK STATE BOARD OF HEALTH.

ricts, cities and towns during May, 1895.

. **For boundaries of *Sanitary Districts*, see Annual Summary.]**

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
1	63	140	22	47	333	103	1047	697	51	354	409	844	452	177	308	103	868
1	53	115	16	30	204	75	667	414	34	201	250	214	300	74	215	42	543
....	8	23	5	12	110	25	304	213	13	119	118	218	89	43	71	30	263
....	....	....	....	1	7	1	9	4	1	3	3	1	6	....	3	....	9
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....	....	....	....	....	.....	1	4	3	1	3	6	5	4	....	1	3	5
....	....	....	....	....	1	.....	.....	.....	.....	2	....	2	2	....	.....	.....	3
....	....	....	....	....	1	1	9	2	1	2	....	4	5	1	1	1	5
....	....	2	....	....	1	.....	7	4	....	.....	.....	3	4	1	1	2	7
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....	7	1	4	14	26	15	117	112	5	70	74	94	139	29	52	61	107
....	1	....	....	....	5	3	20	26	1	15	14	13	28	8	13	12	15
....	....	1	....	2	....	....	5	6	....	3	....	.....	4	1	2	2	6
....	5	....	....	....	2	2	16	16	2	6	9	12	12	3	3	3	12
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.— (*Cont'd*):								
Montgomery	5,259	5	12.00	0	.....	200.00	....	....
Haverstraw	7,714	9	14.00	3	33.3	.....	....	....
Nyack	5,603	5	12.00	0	.....	.....	....	....
Ramapo	6,600	7	13.15	1	14.5	.....	....	....
Rest of District	.....	308	13.20	60	20.0	105.00	2	6
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	351	11.10	59	17.0	74.10	1	8
WATERTOWN	16,982	27	19.60	2	7.5	185.20	...	5
Ellisburgh	4,223	4	12.00	0	.....	.....	....	....
Cape Vincent	3,000	2	8.00	1	50.0	.....	....	....
Clayton	4,250	3	9.00	1	33.0	.....	....	....
OGDENSBURG	11,959	12	13.00	5	41.5	83.35	....	....
Gouverneur	5,921	9	18.20	1	11.0	.....	....	....
Potsdam	4,000	7	21.00	1	13.0	.....	....	....
Canton	6,013	9	18.00	1	11.0	111.10	....	....
Malone	5,000	9	21.60	2	22 0	.....	....	....
Plattsburgh	7,010	7	12.00	2	28.5	.....	....	....
Glens Falls	10,000	5	.....	1	20.0	.....	....	....
Whitehall	4,434	5	13.50	0	.....	.....	....	....
Fort Edward	4,382	8	21.84	2	25.0	125.0	....	....
Kingsbury	5,112	9	21.15	4	44.5	222.20	....	....
Granville	5,281	5	12.00	1	20.0	200.00	....	....
Salem	3,167	.....	.....	.....	.....	.....	....	....
Greenwich	4,431	8	21.68	0	.....	.....	....	....
Rest of District	.....	222	10.50	35	16.0	67.60	1	3
MOHAWK VALLEY DISTRICT:								
Totals	.....	448	14.10	66	12.5	42.50	4	6
SCHENECTADY	22,858	31	16.28	7	21.0	65.00	....	1
Cobleskill	3,436	2	8.00	0	.....	.....	....	....
AMSTERDAM	18,542	18	12.00	4	22.0	110.00	....	....
Fort Plain	3,000	8	28.00	2	28.5	142.85	....	1
JOHNSTOWN	7,768	13	20.00	5	39.0	.....	....	....
GLOVERSVILLE	14,694	18	14.50	1	5.0	.....	....	....
LITTLE FALLS	8,783	3	.....	2	66.0	.....	....	....
Herkimer	5,150	12	24.00	2	18.2	90.00	1	....
Ilion	4,057	3	10.00	1	33.0	.....	....	....
UTICA	46,608	78	20.10	5	6.5	.....	....	....
Whitestown	5,225	3	.....	0	.....	.....	....	....
ROME	13,638	21	18.48	1	5.0	100.00	....	....
Boonville	3,512	3	12.00	0	.....	.....	....	....
Camden	3,675	8	26.00	2	24.0	.....	....	....
Waterford	5,522	13	28.00	2	16.0	.....	....	....
Ballston Spa	3,527	2	.....	1	.....	.....	....	....
Mechanicville	3,000	7	28.00	2	28.0	125.00	....	....
Saratoga Springs	12,000	25	25.00	4	16.0	40.00	....	....
Rest of District	.....	180	12.00	25	14.0	55.50	3	4
SOUTHERN TIER DISTRICT:								
Totals	.....	342	10.50	52	15.2	73.50	1	....
BINGHAMTON	34,514	37	12.86	6	16.2	108.10	....	1
Owego	6,000	6	12.00	1	16.7	166.67	....	....
Candor	3,525	3	11.00	1	33.0	330.00	....	....
Waverly	4,123	3	10.00	0	.....	.....	....	....
ELMIRA	30,000	27	11.00	9	33.0	74.00	....	1
Horseheads	3,319	2	8.00	0	.....	.....	....	....
HORNELLSVILLE	11,898	9	10.00	5	55.5	110.00	....	....

FOR MAY — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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...	....	5	....	....	....	4	2	12	28	3	13	13	36	33	7	13	25	24
....	....	1	....	2	2	....	4	38	59	5	39	27	60	74	21	20	44	42
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...	....	....	....	....	....	....	.....	1	.....	....	.....	....	.....	.....	....	....	....	2
....	....	....	....	....	....	....	.....	.....	2	....	.....	3	.....	3	1	1	1	....
....	....	....	....	....	....	....	.....	.....	.....	....	1	1	.....	1	....	....	....	....
....	....	....	....	....	....	....	.....	6	9	1	4	8	20	13	5	1	3	8
....	....	....	....	....	....	....	.....	1	.....	....	1	....	1	.....	....	....	....	....
....	....	....	....	1	....	....	1	2	2	....	1	2	2	3	1	3	2	1
....	....	....	....	....	....	....	.....	.....	.....	....	2	....	.....	.....	1	....	....	....
....	....	....	....	....	....	....	.....	2	2	1	1	1	3	1	....	....	1	2
....	....	....	....	....	....	....	1	1	.....	....	.....	....	.....	2	....	....	1	1
....	....	....	....	....	....	....	.....	2	.....	1	.....	....	.....	.....	....	1	....	....
....	....	....	....	....	1	....	.....	2	4	....	3	....	2	4	1	2	4	2
....	...	1	....	1	1	....	.....	15	22	1	21	9	21	29	8	8	21	15
5	....	...	1	3	2	6	4	28	39	4	23	25	37	44	16	20	39	42
...	....	....	....	....	....	1	2	8	7	....	.....	3	4	4	2	....	4	1
....	...	....	....	1	....	....	.....	.....	.....	....	1	....	.....	.....	1	...	2	1
....	....	....	....	....	....	1	.....	.....	.....	....	.....	....	.....	.....	....	....	1	1
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	1	....	1	....
....	....	....	....	....	....	1	.....	2	3	....	2	1	1	7	....	3	...	6
....	....	....	....	1	....	....	.....	2	1	....	.....	....	.....	2	1	...	1	....
....	....	....	....	....	....	....	.....	....	2	....	.....	....	.....	....	....	....	....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*):								
Albion	4,536	7	18.20	2	28.5	.....	.....	.....
Brockport	3,742	6	18.12	0	.....	.....	.....	.....
ROCHESTER	150.000	178	14.24	28	16.0	56.25	.....	1
Palmyra	4,173	6	16.50	1	16.5	165.00	.....	.....
Newark	3,000	6	24.00	0	.....	.....	.....	.....
Lyons	6,127	6	12.00	1	16.5	.....	.....	.....
Clyde	3,000	5	20.00	1	20.0	.....	.....	.....
OSWEGO	21,966	27	14.72	4	14.7	75.00	.....	.....
Fulton	4,214	10	28.00	2	20.0	100.00	.....	.....
Richland	3,637	5	15.90	0	.....	200.00	.....	.....
Rest of District	.....	335	13.50	30	12.8	46.50	1	1
Totals for the State	.....	9,452	17.35	2,888	30.5	116.00	46	92
Average for May for past 10 yrs	.....	8,775	.....	2,715	31.0	140.50	68	67
Totals for April, 1895	.....	10,545	19.70	3,506	33.3	115.70	78	115

REMARKS.—The average daily mortality for the month was 308, having fallen from a daily This abrupt decrease, amounting to 1,000 from the month of April, is due to the suspension of having caused during the four months of its continuance about 5,000 deaths. There were 70 and old age, and from all local diseases the mortality was diminished, reports of grippe all of which there were 1,100 deaths, which is 100 less than in either March or April, and 200 less fewer deaths, with the exception of measles, which has been increasing for four months, fever caused 90 deaths, one-third of which occurred in the Hudson valley district, where. Diphtheria caused 25 fewer deaths than in April, all of which decrease is credited to the time in three months caused 1 death in New York; it does not exist elsewhere in this State, five years) was 30 per cent. which is about the average for May. Death rate for the month, anywhere. There were an unusual number of fair days during the month and an average wind being generally south and west.

MAY — (*Concluded*).

Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	.....	1	1	....	.....	1	1	1	1	....	1	....
....	....	....	....	....	.....	.....	1	....	.....	2	1	1	...	1	...	...
....	....	....	2	3	1	22	35	2	11	15	21	22	7	1	19	13
....	....	....	....	1	.....	1	2	....	.....	.....	1	.....	....	...	....	1
....	....	....	....	....	.....	1	.....	....	.....	2	2	.....	....	....	1	....
....	....	....	....	....	.....	.....	.....	....	.....	...	.....	1	....	2	1	2
....	....	....	....	....	.....	.....	.....	....	2	1	1	.....	....	....	1	....
1	....	....	....	....	1	3	9	....	1	....	3	.....	2	....	3	4
....	....	....	....	1	.....	1	1	1	.....	...	.....	3	....	3	....	....
....	....	....	....	....	.....	.....	1	....	1	1	.....	1	....	....	....	....
....	1	1	....	2	1	32	18	3	20	19	26	43	11	13	16	23
83	183	36	77	390	157	1,459	1,149	83	628	669	903	1,022	270	503	413	1250
180	134	42	77	463	135	1,450	1,132	92	505	490	621	977	232	405	613	1119
118	133	62	107	424	151	2,135	1,220	83	666	653	917	1,017	282	483	494	1425

for the preceding month of 351, and for the preceding four months of the year of 368
pe epidemic, which began in January and terminated at the commencement of May,
aths from acute respiratory disease than in April, 100 fewer each from consumption
eport under these chiefly. There is also a decrease in the zymotic mortality, from
the corresponding month of last year. From all the diseases of this class there are
n the maritime district, and is causing double the mortality of a year ago. Typhoid
, there is a material diminution from the mortality of the last two months.
e district; there were 150 less deaths than in May of last year. Smallpox for the first
eing reported from but few localities in other States. The infant mortality (under
eports of contagious diseases from local boards of health show no marked prevalence
ture 2.5 degrees above the normal, with a slight deficiency in rainfall, the direction of

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roma

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	5,555	19.00	2,483	45.0	221.25	28	34
NEW YORK CITY	1,995,000	3,347	20.40	1,597	47.7	236.60	26	33
BROOKLYN	1,086,000	1,664	19.00	715	42.8	224.00	2	8
LONG ISLAND CITY	35,745	74	24.00	31	42.0	230.00	...	1
Newtown	19,776	40	24.00	19	49.0	275.00	....	....
Oyster Bay	14,887	16	13.00	3	18.5	62.50	....	....
Hempstead	23,991	25	13.00	5	20.0	120.00	....	....
North Hempstead	8,726	9	12.50	3	33.0	110.00	....	....
Jamaica	17,654	39	25 00	9	26.0	100.00	....	....
Flushing	20,816	12	.....	6	50.0	83.00	....	....
Southold	7,671	1	.....	1	....	... .	....	....
Sag Harbor	3,000	4	16.00	3	75.0	.....	....	....
Huntington	8,253	10	14.60	3	30.0	200.00	....	....
Brookhaven	13,493	4	.....	1	.....	.....	....	....
New Brighton	17,261	26	18.20	6	23.0	156.00	....	1
Edgewater	15,000	21	16.80	6	30.0	100.00	..	....
Port Richmond	6,390	9	17.50	3	33.0	330.00	..	....
Westfield	8,648	8	12.00	1	12.5	125.00	....	....
YONKERS	35,000	38	13.30	21	55.2	210.50	....	....
Westchester	8,326	2	.....	1	50.0	.....	....	....
Greenburgh	11,630	11	12.00	1	9.0	.....	....	....
MOUNT VERNON	15,513	21	16.25	8	38.0	100.00	....	1
Port Chester	5,274	8	17.00	2	25.0	142.85	....	....
Sing Sing	9,352	12	15.00	3	25.0	83.30	....	....
New Rochelle	8,217	11	.....	3	24.5	90.00	....	....
Peekskill	9,676	12	15.00	5	42.0	166.60	....	....
White Plains	4,042	9	26.00	1	10.0	110.00	....	....
Rest of District	.....	122	13.75	26	20.0	120.00	....	....
HUDSON VALLEY DISTRICT: Totals	.....	805	15.50	151	19.0	117.50	1	5
ALBANY	100,000	152	18.24	35	23.0	160.00	....	9
COHOES	23,234	32	16.50	9	28.2	218.75	..	....
TROY	65,000	97	18.00	19	18.7	138.50	....	5
West Troy	12,967	20	.....	4	.....	.....	....	....
Green Island	4,463	5	13.50	3	60.0	400.00	....	....
Lansingburgh	10,550	14	16.00	3	21.5	.....	....	....
Hoosick Falls	7,014	6	11.00	1	16.7	166.60	....	1
Greenbush	7,462	8	15.50	3	37.5	.....	....	....
Coxsackie	3,824	2	8.00	0	.....	.....	....	....
Catskill	4,920	7	17.00	1	14.2	142.85	....	....
HUDSON	9,633	9	12.00	4	44.5	.....	....	..
KINGSTON	21,500	21	12.00	6	29.0	148.50	..	....
Ellenville	3,000	3	12.00	1	33.0	.....	..	....
Marbletown	3,689	2	8.00	0	.....	500.00	....	....
Rosendale	6,125	6	12.00	3	50.0	166.60	....	....
Esopus	5,035	2	.....	1	50.0	.....	....	....
Saugerties	4,237	4	10.00	0	.....	250.00	....	....
POUGHKEEPSIE	23,200	30	12.00	3	15.0	.....	....	....
Fishkill	11,736	17	18.00	2	11.8	.....	....	....
Wappinger Falls	3,718	5	16.10	1	20.0	.....	....	....
NEWBURGH	24,536	28	15.00	6	21.5	110.00	....	1
Port Jervis	9,327	0	25.00	3	15.0	250.00	....	1
MIDDLETOWN	11,612	19	20.00	4	21.0	155.00	....	....
Warwick	6,000	5	10.00	0	.....	.....	....	....
Goshen	4,646	7	18.00	0	.....	.....	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns during June, 1895.

type. For boundaries of *Sanitary Districts*, see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
28	....	55	192	20	69	287	512	591	591	32	400	385	381	489	127	401	98	835
9	....	46	156	12	44	171	302	397	365	24	236	241	166	290	68	260	39	472
12	....	7	34	6	18	92	177	163	161	9	238	116	167	100	47	98	22	290
....	....	....	2	....	....	4	10	9	5	....	5	5	4	13	1	6	2	7
3	....	....	....	....	1	3	4	4	4	....	3	....	3	3	1	4	....	7
....	....	....	....	....	....	1	.....	1	3	....	.....	2	.....	3	1	2	1	2
....	....	....	....	....	....	....	3	1	1	1	.....	1	3	4	1	2	5	3
....	....	....	....	....	....	1	.....	.....	.....	....	.....	....	5	2	....	1	....	....
....	....	....	....	....	....	....	4	.....	3	....	.....	3	3	7	1	6	6	6
....	....	....	....	....	....	1	.....	.....	1	....	.....	....	1	4	....	1	....	4
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	....	....	....	....
....	....	....	....	....	....	....	.....	1	.....	....	.....	....	1	.....	....	....	....	2
....	....	....	....	1	1	....	.....	.....	2	....	.....	....	.....	2	1	....	....	3
....	....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	1	....	....	....	1
....	....	....	....	....	1	2	.....	4	1	....	4	....	4	4	....	3	....	2
1	....	....	....	....	....	1	.....	1	3	1	1	....	1	4	1	1	2	4
1	....	....	....	....	....	....	2	1	2	....	1	....	.....	1	....	....	....	1
....	....	....	....	....	....	....	1	.....	4	....	1	....	.....	1	....	....	1	....
....	....	1	....	....	....	4	3	2	3	....	1	2	2	11	2	....	....	7
....	....	....	....	....	....	....	.....	1	.....	....	.....	....	.....	1	....	....	....	....
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	1	5	....	2	1	1
....	....	....	....	....	1	....	.....	2	3	....	2	1	4	2	....	....	1	5
....	....	....	....	....	....	1	.....	.....	.....	....	.....	1	2	.....	....	2	....	2
....	....	....	....	....	....	....	1	.....	4	....	1	1	.....	3	....	....	2	....
....	....	....	....	1	....	....	.....	.....	2	....	.....	1	1	1	....	2	2	1
....	....	1	....	....	1	....	.....	1	2	....	1	....	1	2	....	....	....	3
1	....	....	....	....	....	....	.....	.....	.....	....	.....	1	2	1	1	1	2	....
1	....	....	....	....	2	6	5	3	21	....	7	9	9	23	2	10	12	12
2	....	8	3	2	5	19	29	61	108	3	55	55	67	127	32	63	50	80
....	....	1	....	....	....	5	9	13	19	1	11	12	14	22	5	10	5	16
....	....	2	1	....	....	1	5	3	2	....	.....	....	1	3	....	4	8	4
....	....	2	....	1	....	2	4	7	11	1	8	10	10	13	5	4	7	7
....	....	1	....	....	....	....	4	.....	4	....	.....	....	.....	.....	....	.....	....	11
....	....	1	....	....	....	....	1	.....	1	....	.....	....	.....	1	....	1	....	....
....	....	....	....	....	....	....	.....	.....	3	....	1	2	2	2	....	2	....	2
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	3	....	....	....	1
....	....	....	....	....	....	....	.....	2	1	....	.....	....	.....	1	....	....	1	3
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	....	1
....	....	....	....	....	....	1	.....	.....	1	....	.....	1	1	.....	....	3	....	....
....	....	....	....	....	....	....	3	1	4	....	1	1	3	4	....	4	....	....
....	....	....	....	....	....	....	.....	.....	1	....	1	....	.....	.....	....	....	....	1
....	....	....	....	....	....	1	.....	.....	.....	....	.....	....	.....	1	....	....	....	....
....	....	....	....	....	1	....	.....	.....	.....	....	.....	....	.....	2	....	....	1	2
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	1	....	....	....	....
....	....	....	....	....	1	....	.....	.....	1	....	.....	....	.....	.....	....	1	....	1
....	....	....	....	....	....	....	.....	2	2	....	2	2	1	4	....	....	3	3
....	....	....	....	....	....	....	.....	2	3	....	.....	1	1	2	1	5	1	....
1	....	....	....	....	....	....	.....	2	1	....	.....	1	.....	.....	....	....	....	....
....	....	....	....	....	....	2	.....	1	5	....	3	4	3	3	1	1	....	4
....	....	....	2	....	....	2	.....	1	4	....	.....	3	.....	2	1	2	1	1
....	....	....	....	....	....	2	1	1	2	....	1	....	.....	4	1	1	3	3
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	1	1	2	....
....	....	....	....	....	....	....	.....	1	2	....	.....	....	.....	.....	1	1	1	1

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont.*):								
Montgomery	5,259	8	18.25	0	.....	125.00	....	....
Haverstraw	7,714	4	.....	0	.....	.....	....	....
Nyack	5,603	9	19.25	1	11.0	110.00	....	....
Ramapo	6,600	6	10.00	2	40.0	200.00	....	1
Rest of District	.....	287	13.00	40	14.0	85.00	1	7
ADIRONDACK & NORTHERN DIST:								
Totals	.....	303	11.90	50	16.5	86.50	4	4
WATERTOWN	16,982	21	15.00	4	20.0	50.00	....	....
Ellisburgh	4,223	2	.....	0	.....	.....	....	....
Cape Vincent	3,000	1	.....	0	.....	.....	....	....
Clayton	4,250	1	.....	0	.....	.....	....	....
OGDENSBURGH	11,959	20	20.00	6	30.0	200.00	1	1
Gouverneur	5,921	.....	.....	.....	.....	.....	....	....
Potsdam	4,000	.....	.....	.....	.....	.....	....	....
Canton	6,013	6	12.00	0	.....	.....	....	....
Malone	5,000	4	10.00	0	.....	.....	....	....
Plattsburhh	7,010	3	.....	1	.....	.....	....	....
Glens Falls	10,000	9	11.00	1	11.0	110.00	....	....
Whitehall	4,434	1	.....	1	.....	.....	....	....
Fort Edward	4,382	10	27.00	0	.....	.....	....	....
Kingsbury	5,112	8	19.00	3	37.5	.....	....	....
Granville	5,281	5	12.00	1	20.0	.....	....	....
Salem	3,167	3	12.00	1	33.0	.....	....	....
Greenwich	4,431	4	11.00	2	50.0	.....	....	....
Rest of District	.....	205	10.00	30	15.0	98.00	3	3
MOHAWK VALLEY DISTRICT:								
Totals	.....	354	13.00	55	15.6	70.60	1	3
SCHENECTADY	22,858	26	14.00	10	38.5	153.50	....	....
Cobleskill	3,436	1	.....	0	.....	.....	....	....
AMSTERDAM	18,542	16	10.00	4	25.0	250.00	....	1
Fort Plain	3,000	2	8.00	2	.....	.....	....	....
JOHNSTOWN	7,768	4	.....	1	25.0	.....	....	....
GLOVERSVILLE	14,694	11	.....	1	10.0	.....	....	....
LITTLE FALLS	8,783	13	17.75	2	15.4	75.00	....	....
Herkimer	5,150	5	12.00	1	20 0	.....	....	....
Ilion	4,057	2	6.00	0	.....	.....	....	....
UTICA	46,608	56	14.50	13	24.0	90.00	....	....
Whitestown	5,225	7	16.10	0	.....	.....	....	....
ROME	13,638	15	13.30	0	.....	133.30	1	....
Boonville	3,512	3	11.00	0	.....	.....	....	....
Camden	3,675	5	16.20	2	40.0	.....	....	....
Waterford	5,522	7	15.20	2	28.5	142.85	....	....
Ballston Spa	3,327	4	11.00	0	.....	.....	....	....
Mechanicville	3,000	2	8.00	0	.....	.....	....	....
Saratoga Springs	12,000	18	18.00	2	11.0	111.10	....	....
Rest of District	.....	157	11.00	15	10.0	50.00	....	2
SOUTHERN TIER DISTRICT:								
Totals	.....	325	10.25	56	17.2	58.80	1	4
BINGHAMTON	34,514	41	14.25	5	12.6	.....	....	....
Owego	6,000	5	10.00	0	.....	.....	....	....
Candor	3,525	3	11.00	0	.....	.....	....	....
Waverly	4,123	3	9.00	2	66.5	.....	....	....
ELMIRA	30,000	34	13.60	9	26.4	60.00	....	....
Horseheads	3,319	2	8.00	0	.....	.....	....	....
HORNELLSVILLE	11,898	14	15.10	5	35.7	.....	....	....
Bath	3,361	7	25.00	1	14.5	.....	....	....

FOR JUNE — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	1	....	....	.....	.....	1	.. .	1	1	.....	2	....	....	2	....
....	....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	1	....	....	1	....
....	....	1	....	....	....	....	.....	.....	.....	....	1	2	2	2	....	....	1	....
1	....	3	....	....	3	3	6	24	38	1	12 2	13	28	50	14	23	21	29
1	....	1	....	1	3	6	6	14	36	9	37	15	29	35	14	22	34	42
....	....	....	....	....	....	1	.....	2	4	....	2	3	1	1	1	1	2	3
....	....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	2	.....	....
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1	....	1	....	1	2	4	5	8	25	7	12	6	22	25	12	13	20	25
1	....	3	....	2	3	1	11	21	53	6	31	28	40	47	10	28	23	42
....	....	....	....	1	2	....	1	1	2	....	1	3	1	4	1	4	....	5
....	....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	1	....	....
....	....	....	....	....	1	1	1	.....	3	....	.....	1	1	2	1	1	....	3
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1	....	2	....	....	....	....	1	3	1	....	3	1	2	1	2	1	1	2
....	....	....	....	....	....	....	2	8	23	4	15	12	23	18	5	7	15	20
....	....	....	....	....	8	1	5	20	37	2	29	24	37	52	15	23	34	33
....	....	....	....	....	....	....	.....	5	7	....	2	4	3	8	3	2	5	2
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....	....	....	....	....	....	....	2	1	3	...	4	4	4	6	....	4	1	5
....	....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	....	....	2
....	....	....	....	....	....	....	.....	1	.....	....	3	1	2	2	....	1	2	2
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
CORNING	10,025	10	12.00	3	30.0	100.00	....	....
Wellsville	5,033	1	.....	0	.....	.....	....	....
OLEAN	8,000	9	13.50	3	33.3	111.10	1	....
Salamanca	3,700	5	16.20	1	20.0	.....	....	....
DUNKIRK	10,000	9	11.00	2	22.0	.....	....	....
JAMESTOWN	18,627	17	11.00	4	23.5	117.50	....	....
Westfield	3,000	4	16.00	0	.....	.....	....	....
Fredonia	3,400	2	8.00	1	55.0	.....	....	....
Rest of District	....	159	10.00	20	12.5	80.00	....	4
EAST CENTRAL DISTRICT: Totals	.....	355	13.50	64	18.0	56.50	1	1
SYRACUSE	95,000	114	14.42	31	27.2	100.00	1	....
Baldwinsville	3,040	2	8.00	0	.....	.....	....	....
DeWitt	5,182	4	10.00	1	25.0	.....	....	....
Cortland	8,590	13	18.00	2	15.3	75.00	....	....
Homer	3,000	5	20.00	0	.....	.....	....	....
Oneida	6,083	8	16.00	0	.....	.....	....	....
Hamilton	4,110	....	.....	.....	.....	.....	....	....
Cazenovia	3,803	4	12.00	2	50.0	250.00	....	....
Brookfield	3,235	5	18.00	0	.....	.....	....	....
Norwich	5,212	3	7.00	1	33.0	.....	....	....
Oneonta	6,776	4	8.00	1	25.0	.....	....	....
Worcester	2,670	2	8.00	0	.....	.....	....	....
Cooperstown	3,000	.....	.....	.....	.....	.....	....	....
Walton	4,811	4	10.00	1	25.0	500.00	....	....
Delhi	3,000	2	8.00	0	.....	.....	....	....
Liberty	3,471	5	18.00	1	20.0	.....	....	....
Rest of District	.....	180	11.00	24	13.5	35.00	....	1
WEST CENTRAL DISTRICT: Totals	.....	241	11.20	27	11.2	54.10	....	4
AUBURN	24,737	28	13.58	4	14.2	107.00	....	1
ITHACA	13,460	7	.....	2	28.5	142.85	....	....
Hector	4,832	4	10.00	1	25.0	250.00	....	....
Waterloo	4,350	6	16.50	0	.....	.....	....	....
Seneca Falls	6,500	.....	.....	.....	.....	.....	....	....
Geneva	7,557	13	20.50	4	30.0	150.00	....	....
Canandaigua	5,868	1	.....	0	.....	.....	....	....
Manchester	4,181	4	11.50	1	25.0	.....	....	....
Phelps	5,150	7	16.00	0	.....	142.85	....	1
Penn Yan	4,254	4	12.00	0	.....	.....	....	....
Batavia	7,221	5	9.00	1	20.0	.....	....	....
Dansville	3,758	4	12.75	0	.....	....	....	....
Le Roy	3,000	5	20.00	2	40.0	.....	....	....
Warsaw	4,700	5	12.75	1	20.0	.....	....	....
Rest of District	.....	148	10.00	11	7.5	35.00	....	2
LAKE ONTARIO AND WESTERN DISTRICT: Totals	.....	798	13.50	228	28.5	135.00	4	6
BUFFALO	300,000	354	14.15	152	43.0	217.50	2	2
TONAWANDA	7,145	8	15.00	3	37.5	250.00	....	....
Amherst	3,960	3	10.00	2	66.0	330.00	....	....
North Tonawanda	4,800	12	25.00	3	25.0	80.00	....	....
LOCKPORT	16,088	16	12.00	4	25.0	62.00	1	....
NIAGARA FALLS	16,000	16	12.00	3	19.5	250.00	1	1
Medina	4,500	6	16.00	0	.....	.....	....	....
Albion	4,536	4	11.00	1	25.0	.....	....	....

OR JUNE — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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..	....	....	....	....	6	....	3	8	19	1	14	9	22	22	11	8	20	12
1	....	2	....	....	1	3	12	23	30	4	36	26	49	43	24	17	30	52
1	....	1	....	....	1	1	6	10	12	3	8	7	14	13	7	4	4	21
..	....	....	....	....	....	....	.....	.....	.....	....	.....	...	.....	.....	....	.....	2	...
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..	....	....	....	....	....	....	1	.....	3	....	1	1	4	.....	....	.....	.....	3
..	....	....	....	....	....	....	.....	.....	.....	....	2	...	1	1	....	.....	1	....
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..	....	....	....	....	....	....	.....	.....	2	....	1	...	1	.....	....	1	.....	1
..	....	1	....	....	....	....	4	10	12	1	21	16	24	24	15	10	19	22
1	....	....	....	1	2	2	3	15	28	1	24	17	32	38	15	4	23	31
..	....	....	....	....	1	1	.....	2	.....	....	8	1	2	3	4	....	2	3
..	....	....	....	....	....	1	.....	.....	1	....	.....	1	1	1	....	....	.....	2
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1	....	....	....	1	....	....	1	11	24	....	8	12	24	21	9	2	13	19
1	....	2	22	2	4	19	48	80	91	6	63	42	83	96	38	62	56	73
..	....	1	18	1	3	10	40	49	44	3	28	13	21	43	14	24	14	24
..	....	1	...	...	...	...	1	1	.....	....	.....	....	1	.....	....	1	....	3
..	....	....	1	...	...	...	.....	.....	.....	....	.....	....	1	.....	....	.....	....	1
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..	....	....	...	...	...	...	.....	2	2	....	1	2	4	2	....	.....	2	....
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..	....	....	....	....	....	....	.....	1	.....	....	.....	....	1	2	....	1	1	....
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*):								
Brockport	3,742	6	18.00	0	.....	.....	....	....
ROCHESTER	150,000	158	12.68	28	18.8	68.75	...	....
Palmyra	4,173	.....	.....	.....	.....	.....	....	....
Newark	3,000	4	16.00	1	25.0	250.00	....	....
Lyons	6,127	8	15.50	1	12.5	.....	....	....
Clyde	3,000	3	12.00	0	.....	.....	....	....
OSWEGO	21,966	17	10.00	1	6.0	.....	....	....
Fulton	4,214	9	24.00	1	10.0	.....	....	....
Richland	3,637	1	.....	0	.....	.....	....	....
Rest of District	.....	173	12.00	28	16.0	60.00	....	1
Totals for the State	.....	8,736	16.10	3,114	35.6	175.25	40	81
Average for June for past 10 years.	.....	8,286	.....	3,270	39.4	205.40	47	62
Totals for May, 1895	.....	9,453	17.25	2,888	30.0	116.00	46	92

REMARKS.—The reported mortality has fallen from the low daily average in the preceding the preceding five months there were on an average 350 deaths daily, or 317, excluding those this State; during the past ten years the average daily mortality in June has been 277. greatly diminished, the number of deaths being hardly more than half that of May and less caused fewer deaths than usual; although showing less variation than any other disease in Deaths from diseases of the urinary, circulatory and nervous systems have also diminished mortality from diseases of the digestive system. Deaths from accidents and violence have number having occurred from drowning. From common zymotic diseases there was an which always cause an increase in mortality in June; that of the present month being below double that of a year ago, but is almost entirely limited to the maritime and Lake Ontario the State. Other zymotic diseases have diminished. Smallpox caused no deaths and is not above the normal; there were an unusual number of fair days, and the rainfall was deficient,

FOR JUNE—(*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	1	1	2	....
....	....	....	....	1	....	6	4	16	20	2	7	10	22	22	6	12	11	19
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	1	....	....	....	....	....	....	....	2	....	1	....	....
....	....	....	....	....	....	....	....	....	2	....	1	1	....	1	1	1	....	1
....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	1	....
....	....	....	....	....	....	....	....	1	3	....	2	....	4	2	1	....	3	1
....	....	....	....	....	....	....	....	....	1	....	1	....	1	1	2	1	1	1
....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
1	....	....	3	....	1	1	1	9	17	1	18	14	22	17	12	16	19	18
35	....	71	217	28	95	338	626	825	974	63	665	592	718	927	275	620	357	1188
56	7	140	118	27	69	401	775	855	947	80	581	435	565	977	227	445	410	1058
38	1	83	183	36	77	390	157	1,459	1,149	83	628	660	903	1,022	270	503	413	1250

month of 308 to one of 293, and is lower than that of any month since November last; during due to grippe. Next to November, June is uniformly the healthiest month in the year in The death rate per 1,000 population was 16.10. Diseases of the respiratory organs have than 10 per cent. of the total mortality, which is low for the season. Consumption also the monthly mortality, this is always less in June than in the preceding months of the year. in number, as also from old age. There has been, as usual, a moderate increase in the largely increased, more than 7 per cent. of the total mortality being from this cause, a large increase over the preceding month of 430 deaths, due to deaths from diarrhœal diseases, the average. The increasing prevalence of measles continues, and the number of deaths is and western districts. Whooping cough also is increasing and is distributed over all parts of known to exist. The average temperature for the month was 69 degrees, which is 3 degrees with southerly and westerly winds.

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics*, and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	7,874	26.70	4,606	58.5	368.90	30	59
NEW YORK CITY	1,995,009	4,460	26.35	2,645	59.3	352.25	20	27
BROOKLYN	1,100,000	2,510	26.85	1,503	60.0	394.40	9	19
LONG ISLAND CITY	35,745	100	30.75	62	62.0	410.00	....	....
Newtown	19,776	70	42.00	42	60.0	417.15	....	....
Oyster Bay	14,887	23	18.50	10	43.5	260.00	....	....
Hempstead	23,991	51	25.75	24	47.8	405.00	....	2
North Hempstead	8,726	12	16.56	6	50.0	250.00	....	....
Jamaica	17,654	53	35.00	26	50.0	330.00	..	....
Flushing	20,816	43	25.00	21	50.0	410.00	....	1
Southold	7,671	12	19 12	2	16.7	.....	....	....
Sag Harbor	3,000	5	20.00	3	60.0	600.00	....	....
Huntington	8,253	10	14.60	4	40.0	200.00	....	....
Brookhaven	13,493	17	15.30	3	17.1	58.65	....	....
New Brighton	17,261	24	16 80	12	50.0	210.00	....	....
Edgewater	15,000	26	20.80	13	50.0	384.50	....	....
Port Richmond	6,390	7	13.13	5	71.5	428.50	..	....
Westfield	8,648	.....	....	.....	.....	.....	....	....
YONKERS	35,000	82	27.35	56	68.3	500.00	....	....
Westchester	8,326	.....	.....	.....	.....	.....	....	....
Greenburgh	11,630	24	24.70	8	33.0	418.00	....	1
MOUNT VERNON	15,513	51	.....	23	45.0	510.00	....	....
Port Chester	5,274	18	38.00	11	60.0	600.00	....	....
Sing Sing	9,352	11	14.12	8	72.5	454.50	....	....
New Rochelle	8,217	6	.....	3	.....	.....	....	....
Peekskill	8,676	22	27.25	11	50.0	270.00	....	....
White Plains	4,042	15	.....	9	60.0	400.00	....	....
Rest of District	.....	222	24.00	97	45.5	375.00	1	....
HUDSON VALLEY DISTRICT: Totals	.....	917	17.50	321	35.4	261.10	5	22
ALBANY	100,000	166	20.25	59	35.5	265.00	....	10
COHOES	23,234	47	24.30	25	53.2	395.00	1	....
TROY	65,000	121	22.38	48	40.0	300.00	..	4
West Troy	12.967	25	23.07	11	44.0	400.00	....	....
Green Island	4,463	5	13.50	2	40.0	400.00	....	....
Lansingburgh	10,550	20	22.70	10	50.0	400.00	....	....
Hoosick Falls	7,014	4	10.00	0	.....	.....	....	....
Greenbush	7,462	12	19.75	5	42.5	250.00	....	....
Coxsackie	3,824	9	25.60	2	22.0	110.00	....	....
Catskill	4,920	4	10.00	0	.....	.....	....	....
HUDSON	9,633	15	18.60	5	33.0	333.30	2	....
KINGSTON	21,500	38	21.28	17	45.0	368.25	1	....
Ellenville	3,000	4	16.00	0	.....	.....	..	....
Marbletown	3,689	1	.....	0	.....	.....	....	....
Rosendale	6,125	6	12.00	4	66.6	333.30	....	....
Esopus	5,035	6	14.40	3	50.0	.... ..	....	....
Saugerties	4,237	9	25.20	6	66.6	333.30	....	....
POUGHKEEPSIE	23,200	38	19.65	11	29.0	185.20	....	1
Fishkill	11,726	23	23.50	9	40.0	218.20	....	1
Wappingers Falls	3,718	2	8.00	1	50.0	500.00	....	....
NEWBURGH	24,536	39	19.10	22	60.0	500.00	....	....
Port Jervis	9,327	10	12.80	4	40.0	400.00	..	....
MIDDLETOWN	11,612	18	18.20	8	45.0	330.00	....	....
Warwick	6,000	6	12.00	3	50.0	166.60	1	....

ORK STATE BOARD OF HEALTH.

istricts, cities and towns, during July, 1895.

pe. For boundaries of *Sanitary Districts*, see Annual Summary].

laiarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
18	....	28	121	15	113	272	2,258	465	637	52	866	386	400	500	182	337	97	1047
5	....	15	93	9	69	155	1,178	297	389	40	507	251	178	297	106	199	45	580
1	....	9	17	4	28	85	804	120	182	8	300	105	165	99	53	97	17	378
..	....	....	5	....	2	3	31	10	4	....	5	7	8	8	1	3	....	13
..	....	....	2	1	....	4	22	6	8	....	10	....	1	7	....	1	2	6
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..	....	....	....	....	....	1	18	1	2	....	3	5	3	6	3	....	2	5
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..	....	1	....	....	....	....	16	1	3	2	1	....	3	6	....	1	2	10
..	....	....	1	....	....	4	12	1	1	....	2	....	4	9	....	4	1	3
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..	....	....	....	....	....	....	10	1	1	....	2	1	1	4	3	2	....	1
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1	....	....	1	....	4	7	67	12	20	1	16	6	10	24	5	17	15	15
4	....	4	1	....	14	16	173	39	102	5	67	57	66	141	24	46	35	96
1	....	1	1	....	....	3	28	10	24	....	11	13	4	21	6	7	....	26
1	....	....	....	....	3	....	13	2	4	....	4	4	....	6	....	1	2	6
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.— (*Cont'd*):								
Goshen	4,646	8	20.60	0	.....	.....	....	....
Montgomery	5,259	8	18.25	3	37.5	250.00	....	....
Haverstraw	7,714	8	12.50	5	62.5	375.00	....	....
Nyack	5,603	7	15.00	4	57.0	570.00	....	..
Ramapo	6,600	9	16.36	3	33.5	440.00	....	2
Rest of District	.....	243	12.00	50	20.8	150.00	....	4
ADIRONDACK AND NORTHERN DISTRICT:								
Totals	.....	312	12.00	71	22.0	150.50	....	4
WATERTOWN	16,962	19	13.45	3	16.9	.....	....	....
Ellisburgh	4,223	4	11.00	2	50.0	250.00	....	....
Cape Vincent	3,000	4	16.00	0	.....	.....	....	....
Clayton	4,250	5	14.00	0	.....	.....	....	....
OGDENSBURG	11,959	24	24.00	18	75.0	548.00	....	....
Gouverneur	5,921	13	25.00	5	38.5	153.75	....	....
Potsdam	4,000	3	9.00	0	.....	.....	....	....
Canton	6,013	5	10.00	1	20.0	.....	....	
Malone	5,000	8	19.20	0	.....	.....	....	....
Plattsburgh	7,010	8	15.15	3	37.5	250.00	....	....
Glens Falls	10,000	20	24.00	5	25.0	150.00	....	....
Whitehall	4,434	.....	.....	.....	.....	.....	....	....
Fort Edward	4,382	3	.....	0	.....	.....	....	....
Kingsbury	5,112	6	14.40	3	50.0	330.00	....	....
Granville	5,281	1	.....	0	.....	.....	....	....
Salem	3,167	.....	.....	.....	.....	.....	....	....
Greenwich	4,431	5	13.55	1	20.0	200.00	....	....
Rest of District	.....	184	10.00	29	14.3	124.30	....	4
MOHAWK VALLEY DISTRICT:								
Totals	.....	422	16.00	115	27.6	171.50	4	7
SCHENECTADY	22,858	36	18.90	17	47.2	333.30	....	1
Cobleskill	3,436	2	.....	0	.....	.....	....	....
AMSTERDAM	18,542	25	16.18	7	28.0	280.80	....	2
Fort Plain	3,000	2	.....	.....	.....	.....	....	....
JOHNSTOWN	7,768	8	13.00	3	37.5	125.00	....	....
GLOVERSVILLE	14,694	19	15.50	5	26.3	52.50	....	1
LITTLE FALLS	12,000	12	12.00	3	25.0	250.00	..	1
Herkimer	5,150	8	19.00	3	37.5	125.00	1	....
Ilion	4,057	.....	.....	.....	.....	.....	....	....
UTICA	46,608	67	17.30	27	40.0	179.10	....	...
Whitestown	5,225	5	.....	2	.....	.....	....	....
ROME	13,038	13	12.00	2	16.5	.....	....	....
Boonville	3,512	5	17.00	0	.....	.....	....	....
Camden	3,675	4	13 00	1	25.0	250.00	....	....
Waterford	5,522	14	30.00	5	35.7	285.00	....	....
Ballston Spa	3,527	5	17.00	3	60.0	600.00	....	....
Mechanicville	3,000	5	20.00	2	40.0	400.00	....	...
Saratoga Springs	12.000	22	22.00	9	41.0	272.70	....	....
Rest of District	.....	170	12.00	26	15.2	94.20	3	2
SOUTHERN TIER DISTRICT:								
Totals	....	351	11.00	52	15.0	94.25	3	6
BINGHAMTON	31,514	41	14.25	10	24.2	178.75	....	...
Owego	6,100	5	.....	0	.....	.....	....	....
Candor	3,525	4	13.60	0	.....	.....	....	....
Waverly	4,123	5	15.00	2	40.0	400.00	....	....
ELMIRA	30,000	36	14.40	11	30.5	250.00	1	1
Horseheads	3,319	3	11.00	0	.....	.....	....	....

FOR JULY — (*Continued*).

	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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	....	2	....	....	3	9	17	8	21	3	18	21	23	45	8	21	18	21
	....	....	....	....	2	5	37	12	39	3	25	17	32	3 9	19	18	27	33
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	....	....	1	2	2	....	18	10	31	5	26	24	44	48	21	33	41	35
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
HORNELLSVILLE	11,898	9	10.10	2	22.0	.....	....	....
Bath	3,261	3	11.50	0	.....	330.00	....	1
CORNING	10,025	3	.....	1	33.0	333.30	....	1
Wellsville	5,033	.....	.....	.....	.....	.....	....	....
OLEAN	8,000	10	15.00	4	40.0	.....	....	....
Salamanca	8,700	3	10.00	0	.....	.....	....	....
DUNKIRK	10,000	7	10.00	0	.....	.....	....	....
JAMESTOWN	18,627	17	11.00	2	11.7	58.20	....	....
Westfield	3,000	.....	.....	.....	.....	.....	....	....
Fredonia	3,400	3	11.00	0	.....	330.00	....	....
Rest of District	.....	202	12.20	20	10.0	60 00	2	3
EAST CENTRAL DISTRICT:								
Totals	.....	441	14.75	114	28.2	161.35	1	7
SYRACUSE	95,000	157	19.83	67	42.5	300.00	1	1
Baldwinsville	3,040	3	12.00	0	.....	.....	....	....
DeWitt	5,182	12	27.70	1	8.3	166.67	....	1
Cortland	8,590	9	12.55	0	.....	.....	....	....
Homer	3,000	6	24.00	1	16.6	.....	....	....
Oneida	6,088	10	20.00	2	30.0	300.00	....	....
Hamilton	4,110	6	18.00	3	33.0	330.30	....	1
Cazenovia	3,803	3	10.00	0	.....	.....	....	....
Brookfield	3,235	5	18.20	0	.....	200.00	....	....
Norwich	5,212	9	20.70	3	33.3	111.10	....	....
Oneonta	6,776	5	9.00	1	25.0	250.00	....	....
Worcester	2,670	2	10.00	0	.....	.....	....	....
Cooperstown	3,000	3	12.00	0	.....	.....	....	....
Walton	4,811	4	10.00	1	25.0	250.00	....	....
Delhi	3,000	5	20.00	0	.....	.....	....	....
Liberty	3,471	9	25.00	0	.....	.....	....	....
Rest of District	.....	193	12.00	35	18.5	70.50	....	4
WEST CENTRAL DISTRICT:								
Totals	.....	260	12.00	39	15.3	140.00	....	7
AUBURN	24,737	32	15.50	6	18.7	125.00	....	....
ITHACA	13,460	9	.....	2	.....	.....	....	1
Hector	4,832	4	10.00	0	.....	.....	....	....
Waterloo	4,350	1	.....	0	.....	.....	....	....
Seneca Falls	6,500	.....	.....	.....	.....	.....	....	....
Geneva	7,557	7	11.00	1	14.2	285.70	....	1
Canandaigua	5,868	11	21.00	0	.....	.....	....	....
Manchester	4,181	12	.....	1	8.3	82.50	....	....
Phelps	5,150	4	10.00	0	.....	250.00	....	1
Penn Yan	4,254	2	.....	0	.....	.....	....	....
Batavia	7,221	12	19.92	5	41.5	333.30	....	....
Dansville	3,758	6	19.15	0	.....	.....	....	....
Le Roy	3,000	2	10.00	1	50.0	500.00	....	1
Warsaw	4,700	6	15.30	1	16.7	166.60	....	....
Rest of District	.....	152	10.10	22	13.0	130.00	....	3
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	1,104	18.75	523	47.3	276.35	6	5
BUFFALO	335,709	534	19.08	312	58.4	462.55	2	2
TONAWANDA	7,145	12	20.00	5	41.7	166.60	....	1
Amherst	3,960	.....	.....	.....	.....	.....	....	....
North Tonawanda	4,800	13	32.50	7	52.0	460.00	1	1
LOCKPORT	16,088	22	16.50	5	22.7	227 50	....	....
NIAGARA FALLS	16,000	22	16.50	10	45.5	272.70	1	...

OR JULY — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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....	....	....	....	....	....	1	1	.....	1	2	3	1	1	2	4	1	....
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....	....	....	....	....	....	1	.....	.....	....	.....	....	.....	.....	1	....	1	....
....	....	1	1	1	....	3	6	17	3	14	18	28	30	12	15	28	19
....	....	1	....	1	3	57	20	49	2	29	20	51	57	13	29	47	53
....	....	....	....	....	1	43	4	16	....	9	4	15	14	4	11	18	20
....	....	....	....	....	....	.....	.....	1	....	.....	1	.....	1	....	....	.....	....
....	....	....	....	....	....	1	1	.....	....	.....	.....	2	4	....	2	..	1
....	....	....	....	....	....	.....	1	1	....	1	.....	.....	1	1	....	2	2
....	....	....	....	....	....	.....	.....	3	....	.....	1	.....	.....	....	....	2	....
....	....	....	....	....	....	3	.....	1	....	.....	.....	3	1	....	....	2	....
....	....	....	....	....	....	.....	.....	1	....	.....	.....	2	.....	....	1	.....	1
....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	1	....	1	.....	....
....	....	....	....	....	....	1	.....	.....	....	.....	2	.....	1	....	1	.....	....
....	....	....	....	....	....	1	2	.....	....	.....	.....	.....	2	....	3	1	....
....	....	....	....	....	....	1	.....	.....	....	1	.....	.....	1	....	....	1	1
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....	....	....	....	....	....	.....	1	.....	....	2	2	.....	.....	....	....	.....	....
....	....	....	....	....	....	.....	2	1	....	.....	.....	.....	.....	....	1	1	4
....	....	1	....	1	1	7	9	24	2	16	9	28	28	6	9	24	24
....	....	....	1	2	6	21	18	30	1	23	20	32	31	9	15	24	20
....	....	....	....	1	....	3	4	6	....	5	....	4	4	....	1	1	3
....	....	....	....	....	....	.....	1	1	....	.....	1	1	1	....	....	1	2
....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	1	....	....	1	2
....	....	....	....	....	1	.....	.....	.....	....	.....	.....	.....	.....	....	....	.....	....
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....	....	....	....	....	....	1	.....	2	....	1	2	.....	.....	....	....	.....	....
....	....	....	....	....	....	.....	.....	1	....	2	.....	1	2	....	5	.....	....
....	....	....	....	....	....	1	1	1	....	1	....	3	1	....	1	1	2
....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	2	....
....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	1	....	.....	....
....	....	....	....	....	....	4	.....	2	....	2	1	.....	.....	....	....	2	1
....	....	....	....	....	....	.....	.....	1	....	1	1	2	.....	....	....	1	....
....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	.....	1
....	....	....	....	....	....	1	.....	.....	....	1	....	1	1	....	1	....	1
....	....	....	1	1	5	11	12	14	1	10	15	20	21	8	7	5	8
....	....	6	2	3	20	358	49	107	9	70	45	72	122	32	54	46	96
....	....	5	....	....	13	225	28	52	4	25	11	28	55	8	20	14	42
....	....	....	....	....	....	1	.....	3	....	.....	2	.....	2	....	2	1	....
....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	....
....	....	....	....	....	1	3	2	.....	1	1	....	.....	.....	....	1	1	1
....	....	....	....	....	....	5	.....	1	....	.....	1	3	3	2	1	1	5
....	....	....	1	....	....	4	1	1	....	3	.....	.....	2	....	5	1	3

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Cont'd*):								
Medina	4,500	5	13.35	0	.....	200 00	....	....
Albion	4,536	7	18.20	1	14.2	142.85	....	....
Brockport	3,742	4	12.10	2	50.0	.....	....	....
ROCHESTER	150,000	245	19.60	106	.....	.....	....	1
Palmyra	4,173	1	.....	0	.....	.....	....	....
Newark	3,000	1	.....	0	.....	.....	....	....
Lyons	6,127	7	14.00	1	14.2	.....	....	....
Clyde	3,000	6	24.00	1	16.7	166.67	....	....
OSWEGO	21,966	16	10.00	2	12.5	62.50	....	....
Fulton	4,214	11	28.50	4	36.3	181.80	1	....
Richland	3,637	1	.....	0	.....	.....	....	....
Rest of District	.....	197	13.00	67	32.5	210.50	1	....
Totals for the State	.....	11,681	21.50	5,841	50.0	326.21	49	108
Average for July for past 10 years.	.....	11,254	.....	5,780	51.3	353.75	53	94
Totals for June, 1895	.....	8,736	16.10	3,114	35.6	175.25	40	81

REMARKS.—July is always the month of largest mortality on account of the increase in in the month. There was an average daily mortality this month of 377, having risen from 293 was 336. Compared with July of preceding years the mortality is less than it has been since 12,337 and 12,516, against 11,681 this year; the average daily mortality during July in the past fourth of the total deaths from all causes; in the six preceding months there were but 1,295 however, lower than usual, the average number of deaths in July during 10 years having 32.5 per cent. of the deaths were from this cause, or 47 per 100,000 population; in the maritime deaths were from this cause, and in the rural towns only 7 per cent. One-half of the deaths during the preceding six months the infant mortality was 31.5 per cent. From all zymotic per cent. were from these causes. Diphtheria caused less than 3 per cent. of the deaths and urban, causing 143 deaths, and measles 130; scarlet fever exists only in the maritime and cases reported. There is a material increase in the reported mortality from diseases of the mortality. The average temperature for the month of the State was 69 degrees, which is two ency of rainfall continues; wind was variable but generally westerly with low velocity.

OR JULY — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
1	....	....	....	....	....	....	.....	1	.....	....	.....	1	2	.....	....	....	....	....
..	....	....	....	....	....	....	1	.....	2	....	1	....	2	1	....	....	....	....
..	....	....	....	....	....	....	.....	.....	.....	....	1	.....	.....	1	....	....	....	....
..	....	....	....	....	1	3	80	12	23	....	16	20	19	19	11	10	10	20
..	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	1	....
..	....	....	....	....	....	....	.....	.....	1	....	.....	....	....	.....	....	....	....	2
..	....	....	....	....	1	....	.....	1	1	....	3	1	.....	.....	1	....	....	....
1	....	....	....	....	....	....	....	2	1	1	1	1	.....	.....	1	....	....	....
..	....	....	....	....	....	1	.....	.....	4	....	3	3	3	1	....	1	....	....
..	....	....	....	....	....	....	.....	.....	.....	....	.....	1	.....	.....	....	....	1	3
...	....	....	1	1	1	2	39	2	18	3	16	4	15	1 37	10	13	16	18
96	....	32	130	20	143	323	2,974	627	1,040	83	1,135	599	732	1,000	322	549	364	1425
97	6	87	85	15	99	355	3,130	632	1,013	75	935	458	556	1.131	235	513	453	1288
95	....	71	217	28	95	338	626	825	974	63	665	592	718	927	275	620	357	1188

iarrhœal diseases, more than 10 per cent. of the yearly number of deaths usually occurring n June, nearly 3,000 more deaths being reported; the daily average for the six past months 891, the reported number of deaths for 1892, 1893 and 1894 having been respectively 13,555, 0 years has been 370. From diarrhœal diseases there were 2,974 deaths, or more than one-eaths from this cause, of which one-half occurred in June. The diarrhœal mortality is, een 3,130, or 27 per cent. of the total mortality. In the Lake Ontario and Western district istrict 28.6 per cent., or 64 per 100,000 population; in the rest of the State 15 per cent. of the rom all causes occurred under the age of five years, which is below the average for July; iseases there were 3,800 deaths, or 32.6 per cent. of the total, but excepting diarrhœa only 7 s less prevalent than in 1894. Whooping cough exists in all parts of the State, both rural and ludson Valley districts, causing but 32 deaths. There were no deaths from smallpox and no igestive and nervous systems. From consumption there is no variation from the ordinary egrees below the normal and two degrees below the average temperature of June. Defici-

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics*, and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
MARITIME DISTRICT:								
Totals	.....	6,897	28.00	3,522	51.0	289.00	29	72
NEW YORK CITY	1,995,000	3,865	22.85	1,940	50.2	272.25	21	32
BROOKLYN	1,100,000	2,111	22.90	1,131	52.5	303.00	7	24
LONG ISLAND CITY	35,745	104	32.00	55	54.5	375.00	....	3
Newtown	19,776	63	37.80	35	55.0	440 00	....	....
Oyster Bay	14,887	19	15.30	8	42.0	105.00	....	....
Hempstead	23,991	64	32.00	34	53.0	360.00	.	....
North Hempstead	8,726	15	20.70	6	40.0	135.00	....	....
Jamaica	17,654	45	30.50	24	53.3	333.30	....	1
Flushing	20,816	20	12.00	11	55.0	150.00	....	....
Southold	7,671	9	14.00	1	10.0	330.00	....	2
Sag Harbor	3,000	7	28.00	7	.....	700.00	....	....
Huntington	8,253	9	14.00	5	55.5	110.00	....	....
Brookhaven	13,493	34	30.00	8	23.5	230.00	....	1
New Brighton	17,261	43	30.00	20	45.0	250.00	....	1
Edgewater	15,000	33	26.40	18	54.5	300.00	....	....
Port Richmond	6,390	12	21.50	8	66.5	416.60	....	....
Westfield	8,648	11	15.30	7	63.5	272.70	....	....
YONKERS	35,000	65	22.50	38	58.4	369.25	....	1
Westchester	8,326	.....	.....	.....	.....	.....	.....	....
Greenburgh	15,690	32	32.50	19	60.0	562.50	....	....
MOUNT VERNON	15,513	40	30.00	24	60.0	450.00	....	....
Port Chester	5,274	12	25.00	5	41.8	418.00	....	1
Sing Sing	9,352	18	23.00	4	22.2	500.00	....	....
New Rochelle	8,217	18	25.20	8	44.5	166.60	....	....
Peekskill	9,676	22	27.25	12	54.5	182.00	....	....
White Plains	4,042	10	29 50	6	60.0	600.00	....	....
Rest of District	.....	216	25.00	88	40.7	300.00	1	1
HUDSON VALLEY DISTRICT:								
Totals	.....	1,057	19.50	313	39.1	300.00	7	20
ALBANY	100,000	165	19.80	66	40.0	260.60	....	6
COHOES	23,234	54	27.90	37	68.5	385.50	....	....
TROY	65,000	98	18.15	36	35.5	287.50	....	3
West Troy	12,967	16	16.00	7	43.7	187.50	....	....
Green Island	4,463	6	16.15	2	33.0	500.00	1	1
Lansingburgh	10,550	16	18.20	3	18.7	125.00	....	....
Hoosick Falls	7,014	4	....	2	50.0	250.00	....	....
Greenbush	7,462	13	21.37	7	53.8	384.60	....	1
Coxsackie	3,824	7	22.26	4	57.0	285.00	....	....
Catskill	4,920	10	24.30	4	40.0	300.00	....	....
HUDSON	9,633	13	16.12	5	38.5	308.00	....	....
KINGSTON	21,500	37	20.75	24	65.0	460.00	....	1
Ellenville	8,000	5	20.00	2	40.0	200.00	....	....
Marbletown	3,689	8	26.40	3	37.5	375.00	....	....
Rosendale	6,125	9	18.00	2	22.0	330.00	....	....
Esopus	5,035	8	19.20	5	62.5	500.00	....	....
Saugerties	4,237	12	33.60	7	58.3	416.65	....	....
POUGHKEEPSIE	24,200	45	23.25	14	31.1	200.00	....	....
Fishkill	11,726	21	22.00	6	30.0	240.19	....	....
Wappinger Falls	3,718	8	25.75	2	25.0	125.00	....	1
NEWBURGH	24,536	52	25.00	25	48.0	408.00	1	....
Port Jervis	9,327	12	15.36	7	58.3	583.50	....	1
MIDDLETOWN	11,612	22	24.00	7	30.0	136.25	1	....
Warwick	6,000	3	.....	0	.....	.....	....	....
Goshen	4,646	11	28.35	1	9.0	272.70	....	....

STATE BOARD OF HEALTH.

's, cities and towns, during August, 1895.

r boundaries of *Sanitary Districts*, see Annual Summary.]

Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
16	72	14	126	234	1,405	503	683	35	721	329	414	525	183	389	117	1003
13	51	8	64	137	718	338	442	22	398	191	210	292	105	249	51	513
2	17	4	46	71	455	130	171	9	265	104	150	118	52	84	22	369
...	....	....	3	3	28	5	18	....	3	....	3	16	1	10	3	12
...	1	....	1	7	15	3	4	....	5	....	4	4	2	4	1	8
...	....	....	....	....	3	.....	2	....	1	1	3	3	1	1	3	2
...	....	....	....	1	22	1	2	....	2	3	3	13	3	4	3	7
...	....	....	....	....	2	.....	2	....	1	....	....	1	1	2	3	3
...	....	....	....	1	13	4	2	....	2	2	2	5	2	3	3	5
...	....	....	....	1	2	.....	2	1	2	....	3	2	2	1	....	4
1	....	....	....	....	....	.....	....	....	.....	2	1	1	....	2	....	....
...	....	....	1	....	4	1	....	....	....	....	....	....	....	....	....	1
...	....	....	....	....	1	.....	2	....	1	....	....	1	....	2	....	2
...	....	....	....	....	6	.....	1	....	2	1	2	6	2	3	6	4
...	....	....	2	....	8	2	2	1	5	2	3	7	3	3	1	3
...	....	....	1	1	7	.....	4	....	1	2	1	4	....	5	....	6
...	....	....	....	....	5	2	2	....	.....	....	1	.....	1	....	....	1
...	....	....	....	....	3	2	....	....	2	....	....	....	....	1	....	3
...	....	....	1	6	13	3	6	....	2	2	2	13	....	1	..	15
...	....	....	....	....	....	.....	....	....	....	....	....	....	....	....	....	....
...	....	....	....	1	15	.....	3	....	2	....	....	2	....	1	1	5
...	....	....	2	3	13	2	1	....	2	2	2	6	1	....	1	5
...	....	....	....	....	4	.....	1	1	1	....	....	1	..	1	....	1
...	....	1	....	..	6	.....	1	....	.....	....	2	1	1	....	2	2
...	....	....	....	....	3	.....	1	....	2	3	4	1	....	1	1	2
...	....	....	....	....	4	1	2	....	.....	1	1	5	....	1	1	6
...	....	....	....	....	6	.....	....	....	1	....	1	1	....	....	....	1
...	3	1	5	2	50	9	17	1	21	13	16	22	6	10	15	22
4	1	1	15	27	235	53	96	9	78	45	77	127	34	51	54	116
2	1	....	2	3	28	15	15	1	11	5	9	21	4	11	6	24
...	....	....	3	2	16	5	6	....	3	2	1	2	....	3	....	11
1	...	....	....	1	24	7	11	....	8	4	11	9	2	4	2	11
...	....	....	....	1	2	2	1	....	1	3	1	4	....	....	....	1
...	....	....	....	....	1	.....	1	....	.....	....	1	.....	1	....	....	....
...	....	....	....	....	2	.....	2	1	.....	....	1	3	2	1	3	1
...	....	....	....	....	1	.....	3	....	.....	....	....	.....	....	....	....	....
...	....	....	....	1	3	.....	1	....	.....	....	.....	4	....	....	....	3
...	....	....	....	....	2	.....	....	....	1	....	.....	.....	1	1	....	2
...	....	....	....	1	2	.....	....	....	....	....	3	.....	2	....	1	1
...	....	....	....	2	2	.....	3	....	3	....	1	.....	....	1	1	....
...	....	....	....	....	16	.....	1	3	5	1	2	6	....	2	....	....
...	....	....	....	....	1	1	1	....	.....	....	1	.....	....	....	....	1
...	....	....	....	2	1	1	1	....	1	....	2	.....	....	....	....	....
...	....	....	....	1	2	1	.....	....	1	....	.....	1	....	....	2	1
...	....	....	1	....	3	.....	1	....	.....	1	.....	1	....	1	....	....
...	....	....	1	....	4	.....	1	....	.....	2	.....	1	....	....	1	2
...	....	....	....	1	7	1	1	....	9	....	4	9	2	1	2	7
...	....	....	....	3	2	.....	2	....	1	....	3	5	....	1	....	4
...	....	....	....	....	....	.....	....	....	.....	1	.....	1	1	1	1	2
...	....	....	4	2	14	5	3	....	4	5	4	2	1	4	2	1
...	....	....	....	....	6	.....	1	....	.....	....	.....	1	....	1	....	2
...	....	....	....	....	2	.....	2	....	.....	3	3	3	1	1	2	3
...	....	....	....	....	....	.....	2	....	.....	....	.....	.....	....	....	1	....
...	....	....	....	....	2	1	2	....	.....	1	1	.....	....	1	1	1

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Montgomery	5,250	7	16.00	2	28.5	428.50	....	....
Haverstraw	7,714	11	17.15	7	63.5	545.00	....	....
Nyack	5,603	13	25.75	6	46.5	384.50	1	....
Ramapo	6,600	16	25.00	5	35.7	500.00	....	1
Rest of District	.....	355	15.80	115	32.4	276.00	3	5
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	370	13.00	111	30.0	260.00	....	15
WATERTOWN	16,982	36	25.40	11	30.5	361.35	....	5
Ellisburgh	4,223	4	12.00	0	.....	.....	....	....
Cape Vincent	3,000	3	12.00	1	33.0	333.30	....	....
Clayton	4,250	1	.....	1	.....	.....	....	....
OGDENSBURG	11,959	29	29.00	16	54.5	310.00	....	1
Gouverneur	5,921	4	10.00	1	25.0	250.00	....	1
Potsdam	4,000	4	12.00	0	.....	.....	....	....
Canton	6,013	7	14.00	0	.....	.....	....	....
Malone	5,000	3	8.00	0	.....	.....	....	....
Plattsburgh	7,010	3	.....	1	.....	.....	....	....
Glens Falls	10,000	15	18.00	5	33.0	333.30	....	....
Whitehall	4,434	.....	.....	.....	.....	.....	....	....
Fort Edward	4,382	10	.....	4	.....	.....	....	....
Kingsbury	5,112	10	23.50	6	60.0	500.00	....	....
Granville	5,281	5	12.00	1	20.0	.....	....	....
Salem	3,167	.....	.....	.....	.....	.....	....	....
Greenwich	4,431	5	13.55	1	21.0	.....	....	....
Rest of District	.....	231	10.00	64	27.8	252.00	....	9
MOHAWK VALLEY DISTRICT:								
Totals	.....	498	17.00	164	33.0	246.00	2	13
SCHENECTADY	22,858	44	23.10	26	59.0	341.00	1	....
Cobleskill	3,436	.....	.....	.....	.....	.....	....	....
AMSTERDAM	18,542	29	17.76	12	40.0	330.00	....	1
Fort Plain	3,000	5	20.00	0	.....	.....	....	....
JOHNSTOWN	7,768	17	24.75	6	37.0	137 00	....	....
GLOVERSVILLE	14,694	28	22.85	12	42.8	357.00	....	4
LITTLE FALLS	12,000	14	14.00	6	42.8	214.30	....	....
Herkimer	5,150	5	12.00	2	40.0	400.00	....	....
Ilion	4,057	7	20.70	5	71.4	571.40	....	....
UTICA	46,608	84	21.65	24	28.5	202.35	....	2
Whitestown	5,225	2	.....	0	.....	.....	....	....
ROME	13,638	18	15.85	5	27.5	111.10	....	....
Boonville	3,512	3	11.00	0	.....	.....	....	....
Camden	3,675	10	30.00	2	20.0	200.00	....	....
Waterford	5,522	6	13.00	2	15.0	166.60	....	....
Ballston Spa	3,527	8	30.40	2	25.0	125.00	....	....
Mechanicville	3,000	12	40.00	6	50.0	416.00	....	....
Saratoga Springs	12,000	25	25.00	7	28.0	320.00	....	2
Rest of District	.....	181	12.00	47	26.0	216.70	1	4
SOUTHERN TIER DISTRICT:								
Totals	.....	400	12.50	113	28.2	267.50	....	11
BINGHAMTON	34,514	43	15.00	20	46.5	465.00	....	4
Owego	6,000	4	8.00	0	.....	250.00	....	....
Candor	3,525	3	11.00	0	.....	.....	....	....
Waverly	4,123	2	6.00	0	.....	.....	....	....
ELMIRA	30,000	50	.....	15	.....	.....	....	....
Horseheads	3,319	2	8.00	0	.....	.....	....	....
HORNELLSVILLE	11,898	20	.....	8	.....	.....	....	1
Bath	3,261	7	25.00	2	28.0	285.00	....	....

AUGUST — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	...	...	...	...	...	3	.....	.....	....	2	....	.....	.....	1	....	1	....
...	...	...	...	1	...	5	.....	.....	....	.....	....	.....	1	1	....	1	2
...	...	...	...	...	...	4	.....	1	1	1	...	2	1	1	....	...	1
...	...	...	...	1	1	4	.....	2	1	.....	1	.....	.....	...	...	3	2
...	1	....	1	2	6	76	14	31	2	27	16	27	52	14	17	24	33
...	1	....	....	1	9	69	11	26	6	32	10	36	48	16	19	38	32
...	1	....	....	....	1	6	.....	.....	....	4	1	.....	3	3	3	5	4
...	....	....	....	....	....	.....	1	1	....	2	....	1	1	....	....	....	....
...	....	....	....	....	....	1	.....	.....	....	.....	....	.....	1	....	....	....	....
...	....	....	....	....	....	8	1	.....	....	3	1	3	3	1	....	4	4
...	....	....	....	....	....	.....	.....	1	....	.....	....	.....	1	....	....	....	1
...	....	....	....	....	....	.....	.....	.....	....	.....	1	1	2	....	....	....	....
...	....	....	....	....	....	.....	.....	.....	....	.....	....	2	2	....	1	2	....
...	....	....	....	....	....	.....	.....	.....	....	1	....	1	.....	....	....	....	1
...	....	....	....	....	....	1	.....	1	....	.....	....	.....	1	....	....	....	....
...	....	....	....	....	1	4	.....	.....	1	1	1	3	.....	2	1	1	....
...	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	....	....
...	....	....	....	1	....	2	.....	1	....	.....	....	2	2	....	1	....	1
...	....	....	....	....	2	3	.....	1	....	.....	....	.....	1	1	1	1	....
...	....	....	....	....	....	.....	1	.....	....	.....	....	1	1	....	1	1	....
...	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	....	....
...	....	....	....	....	....	.....	.....	1	....	.....	....	1	.....	1	....	1	1
...	....	....	....	....	5	44	8	20	5	21	6	21	30	8	11	23	20
...	1	....	....	2	2	103	19	46	3	31	30	33	54	23	23	60	53
...	....	....	....	....	....	14	2	5	....	3	1	3	6	....	2	1	6
...	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	....	....	....
...	....	....	....	....	....	10	.....	2	...	2	2	1	4	1	1	4	1
...	....	....	....	....	....	.....	.....	.....	....	1	....	.....	.....	2	....	2	....
...	....	....	....	....	....	3	.....	2	....	1	1	2	2	2	1	....	3
...	....	....	....	....	....	6	1	1	....	1	1	1	1	1	....	5	6
...	....	....	....	....	....	3	1	3	....	.....	1	.....	2	1	....	1	2
...	....	....	....	....	....	1	.....	.....	....	1	....	.....	.....	....	1	1	....
...	....	....	....	1	....	4	.....	1	....	1	....	1	.....	....	....	....	....
...	....	....	....	....	....	15	2	18	....	4	4	3	2	4	4	9	10
...	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	1	1	....	....	....
...	....	....	....	....	....	2	1	1	....	.....	1	.....	2	3	2	2	4
...	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	2	....
...	....	....	....	....	....	2	.....	3	....	1	....	.....	1	....	....	2	1
...	....	....	....	....	....	1	.....	1	....	.....	....	.....	1	....	3	....	....
...	....	....	....	....	....	1	1	.....	....	1	2	.....	.....	....	1	2	....
...	....	....	....	....	....	5	1	.....	....	1	2	.....	1	1	....	....	1
...	....	....	....	....	....	6	1	1	....	3	3	4	2	..	2	1	....
...	1	....	....	1	2	30	9	7	3	11	12	18	22	7	6	28	19
...	1	1	....	4	2	87	10	36	3	32	17	41	45	15	14	46	34
...	....	....	....	....	....	16	2	3	....	3	1	2	5	....	1	3	3
...	....	....	....	....	....	1	.....	1	....	1	....	.....	.....	....	....	1	....
...	....	....	....	....	....	.....	.....	.....	....	.....	....	1	2	....	....	....	....
...	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	1	....	1	....
...	1	....	....	....	....	8	3	7	....	5	5	7	4	1	....	2	7
...	....	....	....	....	....	.....	.....	.....	....	1	....	.....	.....	....	....	1	....
...	....	....	....	....	....	6	.....	2	....	2	....	2	4	..	....	1	2
...	....	....	....	....	....	2	.....	2	....	.....	....	1	.....	....	....	1	1

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
CORNING	10,025	17	20.40	8	47.0	530.00	....	1
Wellsville	5,033	.....	.....	.....	.....	.....	....	....
OLEAN	8,000	12	17.50	6	50.0	416.65	....	....
Salamanca	3,700	4	13.01	0	.....	.....	....	....
DUNKIRK	10,000	16	19.20	9	56.2	437.50	....	....
JAMESTOWN	18,627	19	13.00	10	52.0	520.00	....	1
Westfield	3,000	1	.....	0	.....	.....	....	....
Fredonia	3,400	5	17.65	1	20.0.	.....	....	....
Rest of District	.....	195	11.70	34	17.5	135.00	....	4
EAST CENTRAL DISTRICT:								
Totals	.....	445	15.25	136	30.5	238.20	2	6
SYRACUSE	95,000	158	19.00	78	49.0	367.00	1	2
Baldwinsville	3,040	4	16.00	2	50.0	.....	....	....
DeWitt	5,182	6	14.00	1	16.7	333.30	....	1
Cortland	8,590	10	.....	1	.....	.....	....	....
Homer	3,000	4	16.00	0	.....	.....	....	....
Oneida	6,083	13	24.00	4	30.0	230.00	....	....
Hamilton	4,110	5	15.00	0	.....	.....	....	....
Cazenovia	3,803	.....	.....	.....	.....	.....	....	....
Brookfield	3,235	4	14.56	0	.....	250.00	....	1
Norwich	5,212	5	11.50	2	40.0	200.00	....	....
Oneida	6,776	8	13.30	0	.....	.....	....	....
Worcester	2,670	1	5.00	0	.....	.....	....	....
Cooperstown	3,000	2	8.00	0	.....	.....	....	....
Walton	4,811	4	10.00	0	.....	.....	....	....
Delhi	3,000	1	4.00	0	.....	.....	....	....
Liberty	3,471	4	14.50	0	.....	.....	....	....
Rest of District	.....	216	12.00	48	22.2	185.20	1	2
WEST CENTRAL DISTRICT:								
Totals	.....	371	14.75	85	23.0	167.50	1	5
AUBURN	24,737	52	25.20	18	34.5	270.00	....	1
ITHACA	13,460	20	17.85	7	35.0	300.00	....	....
Hector	4,832	10	24.80	0	.....	200.00	....	1
Waterloo	4,350	9	25.00	1	10.0	100.00	....	....
Seneca Falls	6,500	14	24.00	3	23.0	153.80	....	....
Geneva	7,557	15	24.00	6	40.0	267.00	....	....
Canandaigua	5,868	4	.....	1	.....	.....	....	....
Manchester	4,181	2	6.00	1	50.0	.....	....	....
Phelps	5,150	2	.....	0	.....	.....	....	....
Penn Yan	4,254	9	25.00	1	10.0	100.00	....	1
Batavia	7,221	12	20.00	6	50.0	165.00	....	....
Dansville	3,758	8	25.00	3	37.5	.....	....	....
Le Roy	3,000	7	28.00	2	28.5	142.85	....	....
Warsaw	4,700	12	30.00	5	41.8	250.00	....	....
Rest of District	.....	195	11.50	31	16.0	130.00	1	2
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	1,012	16.20	418	41.0	310.00	5	13
BUFFALO	35,709	444	15.87	233	52.5	416.50	2	9
TONAWANDA	7,145	4	.....	1	25.0	250.00	....	1
Amherst	3,960	6	18.00	1	16.7	330.00	....	....
North Tonawanda	4,800	25	.....	16	64.0	540.00	....	1
LOCKPORT	16,088	17	13.00	6	35.0	250.00	....	....
NIAGARA FALLS	16,000	20	15.00	8	40.0	250.00	....	....
Medina	4,500	2	.....	0	.....	.....	....	....
Albion	4,536	10	26.00	2	20.0	300.00	1	....

FOR AUGUST—(*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	2	....	6	.....	.....	....	.....	....	3	.....	2	2	1	....
....	....	....	....	....	....	....	....	.....	.....	....	.....	....	.....	.....	....	....	....	....
....	....	....	1	....	....	....	4	.....	2	2	.....	....	1	.....	....	....	....	2
....	....	....	....	....	....	....	....	.....	.....	....	.....	....	.....	1	....	1	2	....
1	....	....	....	....	....	1	5	1	.....	....	2	....	1	2	....	....	1	2
....	....	....	....	....	....	....	9	.....	2	....	.....	....	.....	4	....	1	1	1
....	....	....	....	....	....	....	....	.....	.....	....	.....	....	1	.....	....	....	....	....
....	....	....	....	....	....	....	....	.....	1	....	.....	....	.....	2	....	....	1	1
....	....	....	....	....	2	1	30	4	16	1	18	11	22	21	11	9	30	15
2	....	1	....	2	....	6	87	5	41	2	27	19	42	61	18	31	47	46
....	....	1	....	2	....	2	50	2	20	2	7	6	7	19	3	8	8	18
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	.....	....	1	.....	2
....	....	....	....	....	....	....	1	.....	.....	....	.....	....	1	2	....	1	.....	....
....	....	....	....	....	....	....	1	2	.....	....	2	....	.....	1	....	1	3	....
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	1	....	.....	2	....
....	....	....	....	....	....	....	3	.....	1	....	1	....	.....	1	2	2	1	2
....	....	....	....	....	....	....	.....	.....	1	....	1	1	1	.....	1	.....	.....	....
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....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	....	1	1	....
....	....	....	....	....	....	....	1	.....	.....	....	.....	1	.....	2	....	.....	.....	1
....	....	....	....	....	....	....	.....	.....	1	....	2	1	3	.....	....	1	.....	....
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	.....	1	....
....	....	....	....	....	....	....	.....	.....	.....	....	1	.....	.....	.....	....	.....	1	....
....	....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	.....	....	1	1	....
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	.....	....	.....	.....	....
....	....	....	....	....	....	....	.....	.....	1	....	1	....	1	.....	....	.....	1	....
2	....	....	....	....	....	4	31	1	16	....	12	9	26	34	11	16	28	23
1	....	....	....	....	3	3	49	16	28	3	46	32	35	48	15	14	44	28
....	....	....	....	....	1	....	12	2	4	....	7	2	3	7	2	2	6	3
....	....	....	....	....	....	....	6	.....	1	....	3	2	.....	2	1	1	3	1
....	....	....	....	....	....	....	1	1	.....	....	2	1	4	.....	....	....	....	....
....	....	....	....	....	....	....	1	1	1	....	1	1	2	1	1	....	....	....
1	....	....	....	....	....	....	2	.....	2	....	2	3	1	1	....	1	1	....
....	....	....	....	....	....	....	4	.....	1	....	2	...	3	.....	1	1	2	1
....	....	....	....	....	....	....	.....	1	1	....	.....	....	.....	.....	....	1	.....	1
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	1	....	1
....	....	....	....	....	....	....	.....	.....	.....	1	.....	....	.....	1	....	....	....	....
....	....	....	....	....	....	....	1	.....	.....	....	.....	1	1	2	1	....	2	....
....	....	....	....	....	....	....	2	.....	.....	....	2	1	.....	2	....	....	2	3
....	....	....	....	....	....	....	.....	.....	2	....	1	....	.....	3	....	....	1	1
....	....	....	....	....	....	....	1	.....	1	....	.....	1	.....	2	....	1	1	....
....	....	....	....	....	....	1	2	.....	.....	....	2	2	1	2	....	....	.....	2
....	....	....	....	....	2	2	18	11	14	2	24	18	20	25	9	6	26	15
1	....	2	2	....	5	22	268	51	95	6	60	41	63	126	53	56	51	92
1	....	2	1	...	3	17	150	23	38	....	19	9	20	56	20	27	15	32
....	....	....	....	....	....	....	.....	1	2	....	.....	....	.....	.....	....	....	....	....
....	....	....	....	....	....	....	2	.....	1	....	1	....	.....	1	....	....	....	1
....	....	....	1	....	....	1	10	1	.....	....	2	....	.....	2	....	2	1	4
....	....	....	....	....	....	1	4	1	.....	....	4	1	.....	4	....	....	1	1
....	....	....	....	....	1	....	4	'	.....	....	2	....	.....	3	....	5	2	1
....	....	....	....	....	....	....	.....	.. ...	1	1	.....	....	.....	.....	....	....	....	....
....	....	....	....	....	....	....	2	.....	.....	....	.....	1	1	2	....	2	1	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT — (*Continued*):								
Brockport	3,742	5	15.10	3	60.0	400.00	....	....
ROCHESTER	150,000	191	15.30	67	35.3	200.00	....	....
Palmyra	4,173	9	25.00	0	.....	.....	....	....
Newark	3,000	6	24.00	2	33.0	.....	....	....
Lyons	6,127	14	27.00	5	35.7	285.00	....	....
Clyde	3,000	5	20.00	0	.....	.....	....	....
OSWEGO	21,966	33	18.00	14	42.4	282.00	....	....
Fulton	4,214	5	14.25	3	60.0	200.00.	....	....
Richland	3,637	4	12.75	0	.....	....	....	....
Rest of District	.....	212	12.70	57	26.7	235.57	2	2
Totals for the State	.....	11,050	20.40	4,962	45.0	282.75	46	156
Average for August for past 10 yrs.	.....	9,655	.....	4,363	45.2	305.15	43	165
Totals for July, 1895	.....	11,681	21.50	5,841	50.0	326.21	49	108

REMARKS.—The average mortality during the month has been 357, against 377 in July, there mortality having been greater in all other parts of the State than it was in July. Compared time district, where there were 900 more deaths than last year. The decrease since July is in diar from this cause is greater than it was a year ago in the metropolis, but generally less else from this cause, against one-fourth in July. From whooping cough there were 156 deaths, from this cause in August than in any other month, the average for the past 10 years being monthly mortality of 100. Its distribution is general. Measles caused but four deaths outside theria and scarlet fever during the same period have been decreasing and continue to. There year as last. Zymotic diseases caused 28 per cent. of the deaths of this month and excepting circulatory systems is high, and cancer caused a somewhat unusual number of deaths. The was not far from the average, the accumulated deficiency since January being about 5 inches.

FOR AUGUST — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	....	2	.....	1	....	.....	....	.....	1	1	....	....	....
....	....	....	....	....	...	1	37	12	23	1	10	12	14	29	14	6	6	26
....	....	....	....	....	....	....	.....	.....	2	....	.....	1	2	1	1	....	1	1
....	....	....	....	....	....	....	.....	.....	2	....	1	2	.....	.....	....	....	1	....
....	....	....	....	....	....	....	4	1	.....	....	.....	....	1	2	....	1	3	2
....	....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	1	1	1	....	....
....	....	....	....	....	....	....	9	2	2	....	3	1	3	5	1	...	1	6
....	....	....	....	....	....	....	1	2	.....	....	.....	....	1	.....	....	....	....	1
....	....	....	....	....	....	....	.....	.....	0	....	1	....	.....	1	....	1	1	....
....	....	....	....	....	1	2	43	7	22	4	17	13	20	18	15	11	18	17
39	....	26	76	17	156	305	2,303	668	1,051	67	1,027	523	741	1,034	357	597	457	1404
76	5	66	42	14	120	303	2,112	580	990	69	766	438	522	985	238	447	462	1210
26	....	32	130	20	143	323	2,974	627	1,040	83	1,135	599	732	1,000	322	549	364	1425

having been 600 fewer deaths. This decrease occurred entirely in the maritime district, the with August, 1894, the mortality is greater by 600, the increase having occurred in the marirrhœal diseases, which caused 2,800 deaths this month against nearly 3,000 in July; the mortality where and notably in Buffalo and Rochester. One-fifth of the deaths during the month were which is more than in any month of which we have record; more deaths uniformly occur 120, against an average for the other months of the year of 77; July has had an average of the maritime district, and its increasing prevalence since March is being suspended. Diphwere 50 more deaths from typhoid fever than in July, but the increase is not as great this diarrhœal diseases, 7.5 per cent. The mortality reported from diseases of the digestive and temperature was 1 degree below the normal for the month, with wide ranges; the rainfall Wind was generally westerly.

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	5,990	20.00	2,896	48.3	255.00	35	81
NEW YORK CITY	1,995,000	3,326	20.30	1,610	48.4	232.75	18	46
BROOKLYN	1,100,000	1,938	21.70	973	50.2	272.00	15	26
LONG ISLAND CITY	35,745	.....	.....	.....	.....	.....	....	....
Newtown	19,776	57	34.60	39	68.5	526.50	....	1
Oyster Bay	14,887	16	13.00	5	31.5	250.00	....	1
Hempstead	23,991	47	23.75	22	46.8	450.00	1	....
North Hempstead	8,726	13	16.75	4	26.0	165.00	....	....
Jamaica	17,654	51	34.60	27	54.0	280.00	....	....
Flushing	20,816	32	18.50	7	21.8	125.00	....	....
Southold	7,671	6	12.00	1	16.7	167.00	....	....
Sag Harbor	3,000	5	20.00	0	.....	.....	....	....
Huntington	8,253	8	12.00	5	62.5	625.00	....	....
Brookhaven	13,493	1	.....	1	.....	.....	....	....
New Brighton	17,261	32	23.40	19	59.4	343.50	....	1
Edgewater	15,000	29	23.20	12	41.0	134.00	....	....
Port Richmond	6,390	11	20.60	3	27.2	363.00	....	....
Westfield	8,648	6	10.00	0	.....	.....	....	....
YONKERS	35,000	75	25.00	44	58.6	306.60	....	....
Westchester	8,326	.....	.....	.....	.....	.....	....	....
Greenburgh	11,630	14	14.50	8	57.0	428.45	....	....
MOUNT VERNON	15,513	16	12.40	8	50.0	250.00	....	1
Port Chester	5,274	8	17.20	7	87.5	675.00	....	....
Sing Sing	9,352	10	12.83	1	10.0	200.00	....	1
New Rochelle	8,217	5	.....	2	40.0	200.00	....	....
Peekskill	9,676	10	12.40	3	30.0	200.00	....	....
White Plains	4,042	12	35.00	5	41.6	416.50	....	....
Rest of District	.....	262	28.00	90	35.5	300.00	4	4
HUDSON VALLEY DISTRICT: Totals	.....	973	16.50	297	30.5	216.75	10	25
ALBANY	100,000	139	16.68	38	27.0	164.25	1	8
COHOES	23,234	38	19.65	20	51.5	315.75	....	3
TROY	65,000	99	18.32	31	31.0	200.50	3	1
West Troy	12,967	18	16.62	8	44.5	150.00	....	....
Green Island	4,463	7	18.83	2	28.6	.....	....	....
Lansingburgh	10,550	22	25.00	3	13.5	231.20	....	....
Hoosick Falls	7,014	6	11.00	3	50.0	.....	....	....
Greenbush	7,462	9	14.80	2	22.0	.....	....	....
Coxsackie	3,824	11	34.00	5	45.4	272.70	1	....
Catskill	4,920	8	19.45	1	12.5	125.00	....	1
HUDSON	9,633	9	11.00	0	.....	220.00	1	....
KINGSTON	21,500	33	18.50	9	27.2	150.00	1	....
Ellenville	3,000	8	32.00	3	37.5	375.00	....	1
Marbletown	3,689	7	24.50	5	71.4	285.00	....	....
Rosendale	6,125	13	24.25	4	30.5	525.00	....	3
Esopus	5,035	8	19.20	4	50.0	375.00	....	1
Saugerties	4,237	7	20.00	1	14.5	142.85	....	....
POUGHKEEPSIE	23,200	35	18.10	9	25.0	145.00	....	1
Fishkill	11,726	18	18.50	7	38.8	220.00	....	....
Wappinger Falls	3,718	4	13.00	0	.....	.....	....	....
NEWBURGH	24,536	40	19.60	15	37.5	150.00	....	1
Port Jervis	9,327	5	.....	1	20.0	400.00	....	....
MIDDLETOWN	11,612	17	17.20	8	47.0	300.00	....	....
Warwick	6,000	6	12.00	1	16.7	166.00	....	....
Goshen	4,646	6	15.50	0	.....	.....	....	....

RK STATE BOARD OF HEALTH.

tricts, cities and towns during September, 1895.

. **For boundaries of *Sanitary Districts*, see Annual Summary.]**

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified
....	17	30	14	99	227	983	504	631	38	595	361	376	479	143	336	99	900
...	10	20	13	60	105	491	341	401	28	321	209	154	274	81	222	35	486
...	5	8	1	29	95	331	141	178	8	221	115	140	116	46	86	26	334
...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
...	1	....	....	3	3	18	3	2	....	3	....	2	8	1	....	1	7
...	....	....	....	....	....	2	2	....	....	2	1	....	1	1	1	....	4
...	....	....	....	....	5	14	1	4	....	4	....	2	5	2	3	3	2
...	....	....	....	....	....	2	1	....	....	1	....	3	2	....	1	1	2
...	1	....	....	....	1	12	1	4	....	3	4	3	11	1	2	2	6
...	....	....	....	....	....	3	2	2	....	1	4	6	5	1	1	2	4
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...	....	....	....	....	....	4	....	4	....	6	2	2	4	1	3	1	2
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...	....	....	....	1	8	13	5	8	....	4	8	7	8	1	1	....	10
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...	....	2	....	5	4	60	5	17	....	22	9	47	26	4	12	17	24
...	3	5	....	6	24	133	52	97	7	72	66	78	160	32	40	70	93
...	1	5	....	....	2	6	11	14	....	6	11	10	24	7	6	11	16
...	....	....	....	1	1	7	2	4	....	3	1	1	5	1	1	1	7
...	....	....	....	1	7	9	11	16	....	5	8	8	17	1	3	2	7
...	....	....	....	....	2	1	3	1	....	2	1	2	3	....	....	3	....
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd.*):								
Montgomery	5,259	19	43.00	6	31.0	255.00	....	....
Haverstraw	7,714	6	10.00	1	16.7	.....	....	....
Nyack	5,608	1	.....	0	.....	.....	....	....
Ramapo	6,600	8	14.56	4	50.0	250.00	1	....
Rest of District	.....	366	15.60	106	29.0	245.85	2	5
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	369	10.00	107	28.6	264.80	1	15
WATERTOWN	16,982	22	15.53	10	45.4	409.50	....	3
Ellisburgh	4,223	4	11.00	1	25.0	250.00	....	....
Cape Vincent	3,000	4	16.00	1	25.0	250.00	....	....
Clayton	4,250	3	10.00	0	.....	.....	....	....
OGDENSBURG	11,959	25	25.00	13	54.0	380.00	....	1
Gouverneur	5,921	.....	.....	.....	.....	.....	....	....
Potsdam	4,000	12	36.00	6	50.0	250.00	....	....
Canton	6,013	5	10.00	0	.....	.....	....	....
Malone	5,000	9	21.60	3	33.3	222.20	....	....
Plattsburgh	7,010	6	11.00	2	33.3	330.00	....	....
Glens Falls	10,000	23	27.60	10	43.4	485.00	....	....
Whitehall	4,434	7	19.00	1	14.3	142.85	....	....
Fort Edward	4,382	10	27.30	4	40.0	300.00	....	....
Kingsbury	5,112	8	18.80	0	.....	.....	....	....
Granville	5,281	1	.....	0	.....	.....	....	....
Salem	3,167	.....	.....	.....	.....	.....	....	....
Greenwich	4,231	2	6.00	0	.....	.....	....	....
Rest of District	.....	228	10.00	55	24.7	247.25	1	11
MOHAWK VALLEY DISTRICT:								
Totals	.....	475	16.75	148	31.5	211.00	....	16
SCHENECTADY	22,858	32	16.80	14	43.5	187.50	....	1
Cobleskill	3,436	6	21.00	1	16.7	330.00	....	....
AMSTERDAM	18,542	20	13.00	5	25.0	300.00	....	1
Fort Plain	3,000	2	8.00	1	50.0	500.00	....	....
JOHNSTOWN	7,768	9	14.00	5	55.5	110.00	....	....
GLOVERSVILLE	14,694	28	22.85	10	35.5	250.00	....	....
LITTLE FALLS	12,000	17	17.00	5	30.0	353.00	....	4
Herkimer	5,150	3	8.00	0	.....	.....	....	....
Ilion	4,057	8	22.00	3	37.5	375.00	....	....
UTICA	46,608	86	22.18	39	45.3	200.00	....	2
Whitestown	5,225	2	.....	0	.....	.....	....	....
ROME	13,638	3	.....	1	33.0	330.00	....	....
Boonville	3,512	2	8.00	0	.....	.....	....	....
Camden	3,675	10	32.65	1	10.0	300.00	....	....
Waterford	5,522	12	25.00	3	25.0	165.67	....	1
Ballston Spa	3,527	4	13.60	0	.....	.....	....	....
Mechanicville	3,000	.....	.....	.....	.....	.....	....	....
Saratoga Springs	12,000	22	22.00	6	27.2	90.00	....	1
Rest of District	.....	209	13.00	54	27.0	215.00	....	6
SOUTHERN TIER DISTRICT:								
Totals	.....	409	12.55	131	33.0	252.50	....	14
BINGHAMTON	34,514	43	15.00	17	39.0	140.00	....	....
Owego	6,000	8	16.00	0	.....	.....	....	....
Candor	3,525	3	11.00	1	33.0	660.00	....	....
Waverly	4,123	7	20.00	4	57.0	285.00	....	....
ELMIRA	30,000	34	13.60	9	26.5	176.50	....	1
Horseheads	3,319	.....	.....	.....	.....	.....	....	....
HORNELLSVILLE	11,898	16	16.50	4	25.0	250.00	....	2
Bath	3,261	4	14.72	1	25.0	.....	....	....

SEPTEMBER — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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....	....	....	1	2	1	79	22	40	3	35	29	40	64	18	28	44	52
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
CORNING	10,025	12	14.50	3	25.0	583.30	....	4
Wellsville	5,033	.....	.....	.....	.....	.....	....	....
OLEAN	8,000	13	.....	6	45.0	75.00	....	....
Salamanca	3,700	4	13.50	1	25.0	500.00	....	....
DUNKIRK	10,000	24	19.50	13	45.0	400.00	....	1
JAMESTOWN	18,627	27	17.40	12	44.0	330.00	....	....
Westfield	3,000	2	8.01	1	50.0	500.00	....	....
Fredonia	3,400	6	21.20	4	66.5	.....	....	....
Rest of District	.....	206	12.10	55	27.2	285.00	....	6
EAST CENTRAL DISTRICT:								
Totals	.....	484	15.75	133	27.3	287.60	2	19
SYRACUSE	95,000	119	15.00	47	40.0	330.00	1	5
Baldwinsville	3,040	1	.....	0	.....	.....	....	....
DeWitt	5,182	7	16.80	2	28.5	428.50	....	....
Cortland	8,590	15	20.92	7	45.0	280.00	....	1
Homer	3,000	9	36.00	1	11.0	111.10	....	....
Oneida	6,088	7	14.00	1	14.2	.....	....	....
Hamilton	4,110	5	15.00	1	20.0	400.00	....	1
Canenovia	3,808	8	24.00	1	12.5	125.00	....	1
Brookfield	3,235	3	12.00	1	33.0	660.00	....	....
Norwich	5,212	11	24.00	3	27.2	181.80	....	....
Oneonta	6,776	13	24.00	4	30.0	300.00	....	1
Worcester	2,670	4	17.00	0	.....	.....	....	....
Cooperstown	3,000	8	32.00	2	25.0	125.00	....	....
Walton	4,811	6	15.00	3	50.0	500.00	....	....
Delhi	3,000	1	.....	0	.....	.....	....	1
Liberty	3,471	6	20.75	1	16.7	.....	....	....
Rest of District	.....	261	14.25	58	22.5	200.00	1	9
WEST CENTRAL DISTRICT:								
Totals	.....	354	14.50	86	24.5	245.00	1	10
AUBURN	24,737	38	18.45	10	26.3	315.75	....	4
ITHACA	13,460	11	10.00	1	10.0	.....	....	....
Hector	4,832	3	9.00	1	30.0	300.00	....	....
Waterloo	4,350	5	14.00	2	40.0	200.00	....	....
Seneca Falls	6,500	.....	.....	.....	.....	.....	....	....
Geneva	7,557	13	20.50	10	77.0	800.00	....	....
Canandaigua	5,868	4	10.00	0	.....	.....	....	....
Manchester	4,181	3	10.00	0	.....	.....	....	....
Phelps	5,150	6	14.20	2	33.0	166.60	....	....
Penn Yan	4,254	9	25.00	1	11.0	111.10	....	....
Batavia	7,221	7	12.00	4	57.0	570.00	....	....
Dansville	3,758	6	19.00	2	33.0	330.00	....	....
Le Roy	3,000	6	24.00	1	16.5	330.00	....	....
Warsaw	4,700	10	25.00	5	50.0	400.00	....	....
Rest of District	.....	233	13.86	47	20.5	238.50	1	6
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	957	15.25	264	28.3	282.10	3	40
BUFFALO	335,709	370	13.25	183	49.5	378.00	1	16
TONAWANDA	7,145	7	12.00	2	28.5	428.50	....	....
Amherst	3,960	5	15.25	0	.....	.....	....	....
North Tonawanda	4,800	13	30.00	9	68.0	384.50	....	2
LOCKPORT	16,088	25	18.75	7	28.0	200.00	....	....
NIAGARA FALLS	16,000	24	18.00	11	45.5	83.30	....	1
Medina	4,500	7	18.75	1	13.8	138.50	....	1
Albion	4,586	9	24.00	3	33.0	111.10	....	....

R SEPTEMBER — (*Continued*).

Small pox.	Scarlet fever	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	....	....	....	....	3	.....	2	....	1	....	.....	... .	....	....	....	2
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....	....	....	....	....	2	1	1	3	....	2	2	2	1	1	2	....	4
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....	....	....	....	....	....	41	5	16	....	14	8	25	27	5	14	22	23
....	2	....	....	....	10	81	11	43	4	48	23	49	55	15	30	47	44
....	1	....	....	....	4	28	5	10	....	7	4	11	10	3	6	9	14
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT — (*Continued*) :								
Brockport	3,742	5	15.10	0	.....	200.00	....	....
ROCHESTER	160,000	157	11.78	51	33.0	223.25	2	7
Palmyra	4,173	6	17.20	0	.....	166.60	....	....
Newark	3,000	7	28.00	2	28.5	.....	....	....
Lyons	6,127	12	24.00	1	8.5	85.00	....	....
Clyde	3,000	2	8.00	1	50.0	500.00	....	....
OSWEGO	21,966	41	27.80	14	35.0	300.00	....	1
Fulton	4,214	9	24.00	5	55.0	330.00	....	1
Richland	3,637	3	10.00	1	33.0	.....	....	....
Rest of District	.....	255	13.50	73	30.0	238.00	....	9
Totals for the State	.....	10,011	18.50	4,161	41.5	250.00	52	220
Average for Sept. for past 10 years	.....	8,570	.....	3,453	40.3	250.55	38	235
Totals for August, 1895	.....	11,050	20.40	4,964	45.0	282.75	46	156

REMARKS.—There has been a further decrease in the total mortality for the month, from an deaths than in the preceding month. There were 800 fewer deaths under the age of 5 years proportion as in September, 1894. The total mortality is, however, larger than it was a year 244.00; this is due entirely to an increase of the diarrhœal mortality, from which there were which was a fair average for that month; the relative zymotic mortality in August was 282.75 whooping-cough and measles have also caused fewer deaths, both, however, being somewhat ingitis, in typhoid fever, in diphtheria and in malarial diseases, though not beyond the sea and populous villages, the death rates being for the total rural population of the State a little the month, against 3.30. Diphtheria caused 28 deaths in 22 rural towns, or less than 2 deaths deaths per 100,000 of the entire urban population for the month. Deaths from malarial dis- scarlet fever, from which there were but 26 deaths Whooping cough and cerebro-spinal men- diseases. The average temperature was 2.5 degrees above the normal and the rainfall def-

'OR SEPTEMBER — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	....	1	1	1	....	1	....	.....	.....	....	....	1	....
...	....	....	....	....	....	2	24	9	23	....	11	7	9	16	2	9	15	21
...	....	....	....	....	....	....	1	.....	1	....	.....	....	1	.....	....	1	2	....
..	....	....	....	....	....	....	.....	.....	.....	....	1	....	1	1	....	1	1	2
...	....	....	....	....	....	....	1	.....	.....	....	3	3	.....	2	....	1	2	....
...	....	....	....	....	....	....	1	.....	.....	....	.....	1	.....	.....	....	....	....	....
...	....	....	....	....	1	....	10	1	7	....	3	....	6	6	1	1	2	2
...	....	....	....	....	....	....	2	.....	1	....	2	1	.....	1	....	....	1	1
...	....	....	....	....	....	....	.....	.....	.....	....	.....	.....	.....	.....	....	....	1	2
...	....	....	....	....	2	6	45	14	27	....	20	16	23	26	11	7	27	22
50	....	26	36	15	119	322	1,672	675	1,009	65	923	577	703	988	277	522	452	1303
88	7	61	23	13	99	360	1,231	661	961	60	705	463	517	867	228	375	471	1120
39	....	26	76	17	156	305	2,303	668	1,051	67	1,027	523	741	1,034	357	597	457	1404

verage daily mortality of 377 in July and 357 in August, to 337, there having been 1,000 fewer han in August, 41.5 per cent. of the deaths having occurred in this early life, which is the same go by 500 deaths, and the relative zymotic mortality greater, being 250.00 per 1,000 against ,672 deaths this month, which is excessive, although it has decreased from 2,300 in August, per 1,000 deaths from all causes. Besides the decrease in deaths from diarrhœal diseases, more prevalent than a year ago. There has been a moderate increase in cerebro-spinal men- onal proportion. Typhoid fever caused 55 deaths in 44 rural towns, and 165 deaths in cities greater than that for the total urban population, viz.: 3.65 deaths per 100,000 population, for per 100,000 of the entire rural population, and 294 deaths in cities and villages, or nearly 6 eases were limited almost entirely to urban localities and environs, which was also true of ngitis were generally distributed. There has been no material increase in acute respiratory ient, with an unusual number of fair days.

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	5,558	10.60	2,055	36.5	159.00	22	85
NEW YORK CITY	1,995,000	3,175	18.75	1,118	35.2	129.75	15	48
BROOKLYN	1,100,000	1,710	17.44	705	41.2	193.00	6	20
LONG ISLAND CITY	35,745	67	20.57	27	40.0	179.10	....	2
Newtown	19,776	59	35.00	30	50.0	390.00	1	....
Oyster Bay	14,887	15	13.00	2	13.5	.....	....	....
Hempstead	23,991	30	15.00	16	53.3	300.00	....	2
North Hempstead	8,726	7	10.00	3	43.0	333.30	....	....
Jamaica	17,654	24	16.32	6	25.0	208 50	..	....
Flushing	20,816	32	18.50	8	25.0	125.00	....	....
Southold	7,671	11	17.16	1	9.0	190.00	....	1
Sag Harbor	3,000	7	28.00	4	57.0	428.50	....	....
Huntington	8,253	10	14.60	0	.....	.....	....	....
Brookhaven	13,493	24	21.60	9	37.5	300.00	....	1
New Brighton	17,261	22	15.40	9	40.9	318.20	....	....
Edgewater	15,000	28	22.40	7	25.0	180.00	....	....
Port Richmond	6,390	10	18.75	5	50.0	400.00	....	....
Westfield	8,648	4	.....	2	50.0	250.00	....	....
YONKERS	35,000	72	24.00	26	36.5	280.50	....	3
Greenburgh	11,630	13	14.00	1	7.7	154.00	....	....
MOUNT VERNON	15,513	13	10.10	2	15.4	77.00	....	....
Port Chester	5,274	10	21.50	5	50.0	400.00	....	1
Sing Sing	9,352	12	15.40	1	8.3	.....	....	....
New Rochelle	8,217	1	.....	1	.....	.....	....	....
Peekskill	9,676	16	19.85	9	56.5	187.50	....	1
White Plains	4,042	18	.....	8	44.5	222.20	....	1
Rest of District	.....	168	20.00	50	30.0	125.00	....	5
HUDSON VALLEY DISTRICT: Totals	.....	889	15.50	236	26.8	142.00	6	38
ALBANY	100,000	164	19.68	54	32.3	189.00	2	6
COHOES	23,234	28	15.00	8	28.5	250.00	....	2
TROY	65,000	114	21.00	44	40.0	210.35	....	2
West Troy	12,967	21	19.40	10	49.0	300.00	....	....
Green Island	4,463	7	18.85	0	.....	.....	....	....
Lansingburgh	10,550	31	30.00	14	46.5	300.00	....	2
Hoosick Falls	7,014	6	11.00	1	16.7	.....	....	....
Greenbush	7,462	12	19.73	2	16.7	.....	....	....
Coxsackie	3,824	8	25.00	0	.....	125.00	....	1
Catskill	4,920	.....	.....	.....	.....	.....	....	....
HUDSON	9,633	9	11.50	1	11.0	.....	....	....
KINGSTON	21,500	33	18.50	5	15.0	151.50	....	1
Ellenville	3,000	8	31.00	1	12.5	500.00	..	3
Marbletown	3,689	3	10.00	2	65.0	.....	....	....
Rosendale	6,125	11	21.50	5	45.0	363.60	...	1
Esopus	5,035	.....	.....	.....	.....	.....	....	....
Saugerties	4,237	6	18.00	2	33.0	330.00	....	....
POUGHKEEPSIE	23,200	24	13.00	7	30.0	125.00	....	1
Fishkill	11,726	16	15.00	4	28.5	142.85	....	1
Wappinger Falls	3,718	7	22.50	2	28.5	428.50	....	....
NEWBURGH	24,536	33	16.00	14	40.0	98.00	....	....
Port Jervis	9,327	17	22.00	3	18.5	235.00	....	2
MIDDLETOWN	11,612	20	20.20	3	15.0	250.00	....	1
Warwick	6,000	7	14.00	0	.....	.....	....	....
Goshen	4,646	8	20.75	0	.....	125.00	....	....
Montgomery	5,259	3	.....	0	.....	.....	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns, during October, 1895.

type. For boundaries of *Sanitary Districts*, see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified
34	2	20	35	9	83	296	298	454	720	39	440	421	435	396	158	314	116	1181
10	2	10	20	4	39	112	154	184	450	30	260	249	216	236	95	206	45	790
10	....	6	11	3	34	132	99	215	201	6	137	123	156	84	46	73	29	310
1	....	....	....	....	3	2	4	6	6	1	1	8	3	9	....	6	1	14
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5	....	4	10	1	3	46	56	81	112	5	68	45	72	118	33	36	63	87
....	....	....	9	....	....	6	8	25	24	2	7	9	11	21	5	2	6	21
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Haverstraw	7,714	9	14.00	5	55.0	.....	....	....
Nyack	5,603	3	10.00	0	.....	.....	....	....
Ramapo	6,600	7	13.00	4	57.0	570.00	....	1
Rest of District	.....	274	12.00	46	17.3	200.00	4	13
ADIRONDACK AND NORTHERN DISTRICT:								
Totals	.....	349	10.00	75	21.4	165.75	2	16
WATERTOWN	16,982	29	20.50	9	33.0	335.00	....	5
Ellisburgh	4,223	5	14.75	2	40.0	200.00	....	....
Cape Vincent	3,000	3	12 00	1	33.0	.....	....	....
Clayton	4,250	2	.....	0	.....	.....	....	....
OGDENSBURG	11,959	9	10.00	3	33.0	.....	....	....
Gouverneur	5,921	8	16.25	0	.....	125.00	....	....
Potsdam	4,000	3	10.00	0	.....	.....	....	....
Canton	6,013	7	14.00	1	14.2	.....	....	....
Malone	5,000	3	8.00	0	.....	.....	....	....
Plattsburgh	7,010	6	11.00	2	33.3	.....	....	....
Glens Falls	10,000	21	25.00	9	45.0	380.00	2	1
Whitehall	4,434	1	.....	0	.....	.....	....	....
Fort Edward	4,382	9	25.00	2	22.2	110.00	....	....
Kingsbury	5,112	7	16.75	1	14.2	.....	....	....
Granville	5,281	4	10.00	1	25.0	500.00	....	....
Salem	3,167	.....	.....	.....	.....	.....	....	....
Greenwich	4,431	5	11.00	0	.....	.....	....	....
Rest of District	.....	227	10.00	44	20.0	157.00	....	9
MOHAWK VALLEY DISTRICT:								
Totals	.....	425	16.00	86	20.0	117.50	2	17
SCHENECTADY	22,858	27	14.12	10	33.0	110.00	1	....
Cobleskill	3,436	4	14.00	1	25.0	250.00	....	....
AMSTERDAM	18,542	24	15.53	5	20.8	85.00	....	....
Fort Plain	3,000	6	24.00	1	16.7	.....	....	....
JOHNSTOWN	7,768	12	18.50	3	25.0	166.60	....	1
GLOVERSVILLE	14,694	99	15.50	5	25.5	50.00	....	....
LITTLE FALLS	12,000	9	10.00	0	.....	220.00	....	2
Herkimer	5,150	8	19.00	0	.....	.....	....	....
Ilion	4,057	8	23.60	2	25 0	125.00	....	....
UTICA	46,608	72	18.50	15	20.8	70.00	....	3
Whitestown	5,225	5	12.00	1	20.0	.....	....	....
ROME	13,638	18	15.85	3	16.6	111.10	....	2
Boonville	3,512	7	24.00	1	14.2	285.00	....	1
Camden	3,675	9	25.00	2	22.0	330.00	....	1
Waterford	5,522	10	21.70	3	30.0	100.00	....	....
Mechanicville	3,000	5	20.00	1	20.0	.....	....	....
Ballston Spa	3,527	4	13.60	0	.....	.....	....	....
Saratoga Springs	12,000	18	18.00	3	16.6	55.00	....	....
Rest of District	.....	160	12.00	30	18.6	147.50	1	7
SOUTHERN TIER DISTRICT:								
Totals	.....	398	12.50	73	18.3	172.50	....	30
BINGHAMTON	34,514	35	12.20	3	8.5	142.85	....	3
Owego	6,000	2	.....	0	.....	.....	....	....
Candor	3,525	3	11.00	2	66.0	330.00	....	....
Waverly	4,123	5	15.00	1	20.0	600.00	....	1
ELMIRA	30,000	38	15.20	10	26.0	76.00	....	3
Horseheads	3,319	2	8.00	1	50.0	.....	....	....
HORNELLSVILLE	11,898	15	15.00	4	26.7	330.00	....	1
Bath	3,261	.....	.....	.....	.....	.....	....	....

FOR OCTOBER — (*Continued*).

Malarial diseases	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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1	....	4	...	2	....	12	21	19	40	3	35	9	31	44	12	17	42	39
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3	....	....	....	....	3	6	19	27	40	4	43	32	41	51	21	20	42	54
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
CORNING	10,025	13	15.60	2	15.5	75.00	....	1
Wellsville	5,033	1	....	.....	.....	.....	....	....
OLEAN	8,000	11	18.00	4	36.4	545.00	....	2
Salamanca	3,700	1	.....	.....	.....	.....	....	....
DUNKIRK	10,000	18	21.60	7	40.0	400.00	....	....
JAMESTOWN	18,627	18	12.00	7	40.0	111.10	....	....
Westfield	3,000	1	.....	.....	.....	.....	....	....
Fredonia	3,400	9	25.00	.....	.....	220.00	....	2
Rest of District	.....	226	13.50	31	13.8	151.20	....	17
EAST CENTRAL DISTRICT: Totals	.....	455	15.00	89	20.0	160.00	2	26
SYRACUSE	95,000	126	16.00	38	30.0	182.50	2	7
Baldwinsville	3,040	5	20.00	1	20.0	200.00	....	....
DeWitt	5,182	5	12.00	2	40.0	.....	....	....
Cortland	8,590	12	16.75	2	16.7	82.50	....	1
Homer	3,000	1	.....	.....	.....	.....	....	....
Oneida	6,083	6	12.09	1	16.7	330.00	....	1
Hamilton	4,110	12	.....	1	8.5	166.00	....	....
Cazenovia	3,803	6	18.95	.....	.....	.....	....	....
Brookfield	3,235	5	18.20	2	40.0	200.00	....	1
Norwich	5,212	7	16.00	2	28.5	285.00	....	....
Oneonta	6,776	13	24.00	1	7.7	461.50	....	4
Worcester	2,670	.....	.....	.....	.....	.....	....	....
Cooperstown	3,000	.....	.....	.....	.....	.....	....	....
Walton	4,811	5	12.50	4	80.0	600.00	....	....
Delhi	3,000	6	24.00	1	16.7	166.70	....	....
Liberty	3,471	10	30.00	3	30.0	300.00	....	....
Rest of District	.....	236	13.00	31	13.3	116.00	....	12
WEST CENTRAL DISTRICT: Totals	.....	327	13.50	49	15.0	141.50	....	16
AUBURN	24,737	38	18.45	7	18.4	131.50	...	2
ITHACA	13,460	15	13.50	1	8.0	150.00	....	....
Hector	4,832	5	13.00	2	40.0	.....	....	....
Waterloo	4,350	13	28.00	4	30.0	230.00	....	....
Seneca Falls	6,500	15	25.00	3	20.0	66.00	....	....
Geneva	7,557	14	23.20	2	14.2	70.00	....	..
Canandaigua	5,868	8	16.00	2	25.0	.....	....	....
Manchester	4,181	6	11.10	1	16.7	166.70	....	1
Phelps	5,150	7	16.30	1	14.2	285.00	....	1
Penn Yan	4,254	4	.....	0	.....	.....	....	....
Batavia	7,221	5	.....	1	20.0	200.00	....	....
Dansville	3,758	6	19.15	1	16.7	166 70	....	....
Le Roy	3,000	6	24.00	1	16.7	166.60	....	....
Warsaw	4,700	5	13.00	3	60.0	400.00	....	....
Rest of District	.....	180	11.00	20	10.3	142.85	....	12
LAKE ONTARIO AND WESTERN DISTRICT: Totals	.....	919	15.00	287	31.5	225.00	2	37
BUFFALO	335,709	394	14.10	151	38.0	275.00	1	20
TONAWANDA	7,145	12	20.00	8	66.0	166.70	....	....
Amherst	3,960	7	21.00	1	14.2	.....	....	....
North Tonawanda	4,800	15	.....	6	40.0	450.00	....	2
LOCKPORT	16,088	10	.....	1	10.0	100.00	....	....
NIAGARA FALLS	16,000	17	13.50	6	35.3	350.00	1	1
Medina	4,500	2	.....	0	.....	.....	....	....
Albion	4,536	5	13.00	2	40.0	200.00	....	...

OCTOBER — (*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
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..	....	....	....	....	5	12	12	20	1	21	22	24	24	10	14	30	14
..	2	....	....	....	6	36	34	47	2	37	28	43	53	26	24	36	53
..	2	....	....	....	2	10	15	12	....	7	7	9	13	7	4	9	20
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..	....	....	....	2	3	22	19	30	....	33	18	27	42	16	22	40	34
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*):								
Brockport	3,742	4	12.80	1	25.0	.....	....	..
ROCHESTER	160,000	175	13.13	53	30.3	171.25	....	4
Palmyra	4,173	6	17.20	0	.....	.....	....	....
Newark	3,000	3	12.00	0	.....	.....	....	....
Lyons	6,127	8	15.80	2	25.0	125.00	....	....
Clyde	3,000	1	.....	1	.....	.....	....	....
OSWEGO	21,966	22	12.50	4	18.0	90.00	....	....
Fulton	4,214	4	12.00	1	25.0	250.00	....	....
Richland	3,637	6	19.10	0	.....	.....	....	....
Rest of District	.....	228	12.50	50	22.0	200.00	....	10
Totals for the State	.....	9,320	17.20	2,951	31.5	167.00	36	265
Average for Oct. for past 10 years	.....	8,180	.....	2,665	32.6	188.50	34	220
Totals for Sept., 1895	.....	10,011	18.50	4,161	41.5	250.00	52	229

REMARKS.—There have been reported 9,320 deaths during the month, or a daily average of
period of last year, which was one of unusual salubrity, the total mortality is greater by 200.
in October, being 32.5 per cent.; in September the relative proportion was 41.5 per cent. The
per cent. on account of a large decrease from an excessive diarrhœal mortality, which is less
mortality for the month, which is about the normal average; the decrease is uniform through
for October; its relative prevalence is greatest in the more sparsely settled sanitary districts,
5.0 per cent. in the rest of the State; its largest prevalence is reported from Watertown,
135 more than in September, but 100 less than in October, 1894; 5.0 per cent. of the deaths were
than this, the Lake Ontario and Western district having had 8.0 per cent., while in the rest of
36 deaths, of which 20 occurred in the maritime district. Measles caused 46 deaths, all in the
sumption caused 12.0 per cent. of the deaths, the largest since May. Acute respiratory
September. The average temperature over the State was 45 degrees, which is much below
of unusual velocity.

FOR OCTOBER}— (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	.....	.....	.....	1	...	.....	...	.....	1	1	....	....	1
...	....	....	....	....	...	13	13	11	20	1	15	14	16	22	6	6	13	21
...	....	....	....	....	....	....	.....	.....	2	....	.....	....	1	1	2	....	....	....
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	1	....	....	1	....
...	....	....	....	....	....	....	1	1	1	....	.....	....	1	3	1	....	....	....
...	....	....	....	....	....	....	1	.....	.....	....	.....	...	.....	.....	.....	....	....	....
...	....	...	....	....	...	....	2	.....	4	....	1	3	5	2	2	....	1	2
...	....	....	....	....	....	....	1	.....	.....	....	.....	....	.....	.....	.....	1	2	....
...	....	....	....	....	....	....	.....	.....	.....	....	3	....	1	1	1	....	....	....
3	....	1	....	1	2	14	15	16	16	1	18	11	33	19	10	15	26	17
50	2	36	46	13	95	458	554	749	1,112	67	761	630	767	840	319	511	445	1564
83	7	77	26	14	68	537	465	920	1,017	60	607	454	577	864	236	358	484	1070
50	....	26	36	15	115	392	1,672	675	1,009	65	923	577	703	988	277	523	452	1308

about 800, against one of 837 in the preceding month. Compared with the corresponding The infant mortality is unusually low, 31.5 per cent. of the total, that of the last ten years, zymotic mortality, which caused 25 per cent. of the deaths in September, is reduced to 16.7 by 1,100 deaths, and which is reported as having caused but 550 deaths, or 6.0 per cent. of the out the State. Typhoid fever caused nearly 3.0 per cent. of all deaths which is the average out 1.5 per cent. of the deaths being from this cause in the maritime district against nearly Niagara Falls, Binghamton, Oneonta, Churchville and Erwin. Diphtheria caused 458 deaths, rom this cause, the maritime and Hudson valley districts reporting in somewhat larger rate he State there were only 2.0 per cent. of deaths from this cause. Scarlet fever caused but naritime and Hudson valley districts; its greater prevalence will be noted in October. Con- iseases caused an unusually small mortality for the season, being but little greater than in he normal, with high barometer and deficiency in rainfall, and northerly and westerly winds

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
MARITIME DISTRICT: Totals	.....	5,008	16.75	1,655	33.1	138.20	4	68
NEW YORK CITY	1,995,000	2,935	18.80	989	33.7	118.57	9	57
BROOKLYN	1,100,000	1,503	16.80	490	22.6	155.35	4	17
LONG ISLAND CITY	35,745	51	15.70	18	36.0	100.00	....	2
Newtown	19,776	38	23.00	12	31.5	105.00	....	....
Oyster Bay	14,887	17	13.70	7	41.0	.....	....	....
Hempstead	23,991	29	14.50	8	27.2	34.00	....	....
North Hempstead	8,726	3	.....	0	.....	.....	....	....
Jamaica	17,654	37	25.00	17	52.0	540.00	....	1
Flushing	20,816	36	20.75	13	36.2	166.60	....	1
Southold	7,761	3	.....	1	33.0	.....	....	....
Sag Harbor	3,000	4	16.00	2	50.0	250.00	....	....
Huntington	8,253	8	12.00	2	25.0	125.00	....	1
Brookhaven	13,493	12	12.00	5	42.0	250.00	....	....
New Brighton	17,261	19	13.50	4	20.0	246.00	....	3
Edgewater	15,000	57	21.60	7	24.0	185.00	....	....
Port Richmond	6,390	7	13.00	5	71.5	142.85	....	....
Westfield	8,648	5	.....	1	20.0	.....	....	....
YONKERS	35,000	72	24.00	24	33.0	277.75	....	3
Greenburgh	11,630	17	18.00	5	30.0	176.50	....	....
MOUNT VERNON	15,513	13	11.00	3	23.0	153.25	....	1
Port Chester	5,274	14	30.00	1	7.0	285.00	....	....
Sing Sing	9,352	9	12.00	1	11.0	110.00	....	....
New Rochelle	8,217	14	20.25	6	42.8	142.85	....	....
Peekskill	9,676	16	20.00	5	31.2	125.00	....	....
White Plains	4,042	8	24.00	3	37.5	250.00	1	....
Rest of District	.....	106	12.50	26	15.5	180.00	....	2
HUDSON VALLEY DISTRICT: Totals	.....	854	15.00	190	22.2	165.10	2	39
ALBANY	100,000	193	22.65	61	31.6	354.00	1	13
COHOES	23,234	31	16.00	12	39.0	130.00	....	2
TROY	65,000	98	18.00	23	23.7	206.20	....	7
West Troy	12,967	17	15.50	4	24.5	125.00	....	1
Green Island	4,463	1	.....	0	.....	.....	....	....
Lansingburgh	10,550	22	24.00	7	30.0	45.50	....	....
Hoosick Falls	7,014	4	.....	1	25.0	.....	....	....
Greenbush	7,462	6	10.00	1	16.7	330.00	....	1
Coxsackie	3,824	4	12.75	0	.....	250.00	....	....
Catskill	4,920	5	13.00	2	40.0	200.00	....	....
HUDSON	9,633	10	12.50	2	20.0	.....	....	....
KINGSTON	21,500	30	16.80	5	16.6	166.60	....	....
Ellenville	3,000	5	20.00	1	20.0	.....	....	....
Marbletown	3,689	4	13.00	0	.....	.....	....	....
Rosendale	6,125	7	13.85	0	.....	.....	....	....
Esopus	5,035	4	10.00	1	25.0	.....	....	....
Saugerties	4,237	2	6.00	0	.....	.....	....	....
POUGHKEEPSIE	23,200	42	21.70	9	23.0	155.00	....	....
Fishkill	11,726	15	16.00	4	27.0	67.50	....	1
Wappinger Falls	3,718	3	10.00	1	33.0	.....	....	....
NEWBURGH	24,536	31	15.00	7	23.0	66.00	....	....
Port Jervis	9,327	18	23.50	4	22.0	220.00	....	3
MIDDLETOWN	11,612	17	17.25	3	17.7	59.00	....	....
Warwick	6,000	8	16.00	1	16.7	166.70	....	....
Goshen	4,646	8	20.00	0	.....	.....	....	....
Montgomery	5,259	7	16.00	0	.....	.....	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns during November, 1895.

type. For boundaries of *Sanitary Districts*, see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
32	....	30	63	14	42	332	96	931	634	49	321	273	389	384	130	297	2	712
12	....	16	46	7	22	145	53	593	412	37	168	233	181	241	67	205	32	419
12	....	11	12	6	16	136	19	260	159	9	119	112	161	75	47	70	29	229
1	....	..	....	....	....	5	2	4	5	....	4	3	2	9	....	3	....	11
....	....	....	....	....	....	4	.....	12	5	....	.....	1	2	3	....	2	1	8
....	....	....	....	....	....	....	.....	1	1	....	1	3	3	2	....	1	2	3
....	....	....	....	....	....	....	1	6	4	..	3	3	1	3	....	2	....	6
....	....	....	....	....	....	....	.....	...	1	....	.....	....	....	.....	....	1	1	....
1	....	....	2	....	....	14	2	3	.....	1	.....	1	1	1	2	1	1	6
1	....	....	....	....	....	4	.....	8	3	....	2	2	2	8	2	1	1	1
....	....	....	....	....	....	....	.....	...	1	1	.....	....	1	.....	....	....	....	....
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....	....	....	....	....	....	....	3	2	.....	....	.....	....	.....	2	....	1	2	2
....	....	2	....	....	....	....	.....	1	2	1	.....	2	2	1	..	1	2	2
....	....	....	....	....	....	4	1	4	3	....	.....	2	5	3	2	1	....	2
....	....	....	1	....	....	....	.....	2	.....	....	1	....	1	.....	....	....	....	2
....	....	....	....	....	....	....	.....	...	3	....	.....	....	.....	.....	1	....	1	....
1	....	1	....	....	....	11	4	6	8	....	3	1	7	12	6	4	2	3
2	....	....	....	....	....	1	.....	1	2	....	1	1	2	2	1	....	2	2
....	....	....	....	....	....	....	1	3	2	....	2	....	.....	1	1	....	2	....
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....	....	....	....	....	....	....	1	1	.....	....	2	..	1	2	....	....	1	1
....	....	....	1	....	1	2	.....	2	2	....	1	....	4	2	....	....	....	1
....	....	....	....	....	....	....	.....	2	2	2	2	....	.....	1	....	....	2	3
....	....	....	....	....	....	....	1	1	1	....	1	1	.....	1	....	....	....	....
2	....	....	1	....	2	4	7	15	17	....	10	5	10	11	1	3	8	8
6	....	7	22	....	8	42	15	120	76	1	58	52	83	102	24	38	62	97
1	....	1	16	....	3	7	7	26	18	....	11	14	14	21	6	5	6	23
....	....	..	..	....	..	..	2	2	2	....	.....	4	6	6	..	1	1	5
....	....	2	4	....	....	5	2	21	9	....	4	7	4	8	3	4	6	12
....	....	....	....	....	....	....	1	4	3	....	3	....	1	3	....	....	....	1
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....	....	....	4	....	....	....	.....	3	.....	....	.....	....	.....	1	....	....	....	....
1	....	....	....	....	....	....	.....	.....	1	....	.....	....	1	.....	....	....	1	....
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....	....	....	....	....	....	....	.....	3	2	....	.....	1	.....	1	....	....	1	3
1	....	1	....	....	1	1	.....	3	3	....	3	2	3	4	3	2	3	....
....	....	....	....	....	....	....	.....	1	....	....	1	....	..	.....	1	....	1	1
....	....	....	....	....	....	....	.....	...	....	....	.....	....	2	.....	1	1	....	....
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1	....	1	....	....	....	5	.....	4	1	....	3	2	4	7	....	3	2	2
....	....	....	....	....	....	....	.....	1	....	....	1	1	2	3	....	1	1	4
....	....	....	....	....	....	....	.....	...	1	....	.....	....	.....	.....	....	....	....	1
....	....	....	....	....	....	2	.....	7	5	....	1	4	2	.....	1	4	2	3
1	....	....	....	....	....	....	.....	1	2	....	1	1	2	.....	....	3	1	3
....	....	....	....	....	....	....	1	4	2	....	1	1	.....	3	....	3	1	1
....	....	....	....	....	....	1	.....	...	.....	....	.....	1	.....	.....	....	3	....	3
....	....	....	....	....	....	....	.....	2	2	....	.....	....	1	2	....	....	....	1
....	....	....	....	....	....	....	.....	1	1	....	.....	....	1	2	1	....	1	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Haverstraw	7,714	7	11.50	3	42.8	142.85	....	...
Nyack	5,603	6	13.00	2	23.0	500.00	....	....
Ramapo	6,600	9	16.40	3	33.0	220.00	....	....
Rest of District	.....	240	11.50	34	14.2	140.00	1	11
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	301	10.00	49	16.3	53.35	1	12
WATERTOWN	16,982	27	19.00	5	18.5	220.00	....	5
Ellisburgh	4,223	6	17.00	1	16.7	.....	...	....
Cape Vincent	3,000	5	20.00	2	40.0	.....	....	....
Clayton	4,250	5	14.50	0	.....	.....	....	....
OGDENSBURG	11,959	21	21.00	6	28.5	50.00	....	1
Gouverneur	5,921	2	.....	2	.....	500.00	....	....
Potsdam	4,000	5	15.00	2	40.0	200.00	....	....
Canton	6,013	3	6.00	0	.....	.....	....	....
Malone	5,000	6	14.40	0	.....	.....	....	....
Plattsburgh	7,010	6	11.00	1	16.7	166.70	...	....
Glens Falls	10,000	16	19.20	1	7.0	.....	....	....
Whitehall	4,434	1	.....	1	.....	.....	....	....
Fort Edward	4,382	7	19.10	1	14.2	142.85	....	....
Kingsbury	5,112	6	14.00	0	.....	166.60	....	....
Granville	5,281	4	10.00	0	.....	.....	....	....
Salem	3,167	2	8.00	0	.....	.....	....	....
Greenwich	4,431	3	9.00	0	.....	330.00	....	....
Rest of District	.....	176	10.00	27	15.3	75.00	1	6
MOHAWK VALLEY DISTRICT:								
Totals	.....	377	13.0.	58	15.4	85.00	1	12
SCHENECTADY	22,858	36	17.85	7	17.6	58.75	....	....
Cobleskill	3,496	3	11.50	0	.....	.....	....	....
AMSTERDAM	18,542	15	10.00	3	20.0	66.60	....	....
Fort Plain	3,000	3	12.00	0	.....	330.00	....	1
JOHNSTOWN	7,768	13	20.00	2	15.0	.....	....	....
GLOVERSVILLE	14,694	17	14.00	2	11.7	116.75	....	1
LITTLE FALLS	12,000	12	12.00	0	.....	250.00	....	3
Herkimer	5,150	6	12.00	0	.....	.....	....	....
Ilion	4,057	3	9.00	1	33.0	.....	....	....
UTICA	46,608	59	15.22	6	10.5	67.00	....	1
Whitestown	5,225	3	8.00	1	33.0	.....	....	....
ROME	13,638	16	14.00	2	12.5	.....	....	....
Boonville	3,512	.....	.....	.....	.....	.....	....	....
Camden	3,675	6	19.50	1	16.7	.....	....	....
Waterford	5,522	10	21.50	1	10.0	100.00	....	....
Mechanicville	3,000	6	24.00	2	33.0	.....	....	....
Ballston Spa	3,527	2	8.00	1	50.0	500.00	....	1
Saratoga Springs	12,000	16	16.00	4	25.0	250.00	....	....
Rest of District	.....	152	12.00	25	16.5	80.00	1	3
SOUTHERN TIER DISTRICT:								
Totals	.....	331	10.00	49	15.1	133.25	1	13
BINGHAMTON	34,514	34	12.00	11	33.3	241.00	....	....
Owego	6,000	8	16.00	0	.....	.....	....	....
Candor	3,525	6	20.40	1	16.7	500.00	....	3
Waverly	4,123	3	10.00	0	.....	.....	....	....
ELMIRA	30,000	35	14.00	6	17.0	56.75	....	2
Horseheads	3,319	5	18.00	2	40.0	.....	....	....
HORNELLSVILLE	11,898	14	14.25	3	21.5	.....	....	....
Bath	3,261	3	11.00	0	.....	.....	....	....
CORNING	10,025	14	16.80	2	14.5	214.30	....	....

NOVEMBER—(*Continued*).

Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	1	....	.....	1	1	....	1	....	.....	.....	....	....	....	3
...	....	....	....	....	3	.....	.....	.....	....	.....	....	1	.....	....	....	2	....
...	2	1	....	2	15	2	30	17	1	23	12	28	38	8	6	26	16
...	2	....	....	1	5	5	26	38	2	30	20	35	34	15	21	27	27
...	1	....	....	....	....	.....	2	.....	1	3	3	4	1	....	4	1	2
...	....	....	....	....	....	.....	.....	3	....	2	....	.....	.....	1	....	....	....
...	....	....	....	....	....	.....	1	1	....	1	....	.....	.....	....	....	1	1
...	....	....	....	....	....	.....	.....	.....	....	.....	....	3	.....	1	1	....	....
...	....	....	....	....	....	.....	2	4	....	1	3	1	4	1	1	1	2
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...	....	....	....	....	....	.....	4	3	....	1	1	2	2	1	1	1	.. .
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...	....	....	....	....	....	1	.....	.....	....	1	....	1	.....	....	....	....	....
...	1	....	....	1	1	3	12	23	1	19	11	16	22	10	12	19	18
...	2	....	1	1	10	5	40	56	3	28	25	41	43	18	21	28	42
...	1	....	....	1	....	1	2	12	....	2	1	2	6	2	2	2	2
...	....	....	....	....	....	.....	.....	2	....	.....	.....	.....	.....	....	....	1	....
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...	....	....	....	....	....	.....	1	4	....	.....	1	4	.....	1	2	....	....
...	....	....	....	....	....	1	.....	5	....	.....	1	4	1	1	....	1	2
...	....	....	....	....	....	.....	2	1	....	1	2	1	.....	....	1	1	....
...	....	....	....	....	....	.....	.....	2	....	.....	.....	.....	1	1	1	....	....
...	....	....	....	....	....	.....	.....	.....	....	.....	.....	1	.....	....	....	1	1
...	....	....	....	....	3	.....	7	3	2	2	4	10	8	5	3	1	10
...	....	....	....	....	....	.....	1	.....	....	1	....	1	.....	....	....	....	....
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...	....	....	....	....	....	.....	.....	.....	....	4	1	.....	1	....	....	....	....
...	1	....	....	....	....	.....	1	1	....	1	1	.....	2	1	....	1	1
...	....	....	....	....	....	.....	1	.....	....	2	....	1	.....	....	....	....	2
...	....	....	....	....	....	.....	.....	.....	....	1	....	.....	.....	....	....	....	....
...	....	....	....	1	....	1	2	2	....	.....	1	.....	.....	1	1	1	4
...	....	....	1	....	6	1	17	21	1	10	12	16	19	6	9	16	13
...	1	1	1	....	11	8	30	23	3	30	25	37	36	13	20	37	34
...	....	....	....	....	8	.....	2	1	....	5	3	2	5	1	1	3	3
...	....	....	....	....	....	.....	.....	.....	....	1	1	1	2	....	....	2	1
...	....	....	....	....	....	.....	1	.....	....	.....	.....	.....	.....	.....	1	1	....
...	....	....	....	....	....	.....	1	.....	....	.....	.....	1	.....	1	....	....	....
...	....	....	....	....	....	.....	4	2	....	4	6	1	4	2	2	4	4
...	....	....	....	....	....	.....	1	.....	....	1	1	1	1	....	....	....	....
...	....	....	....	....	....	.....	2	2	....	.....	3	2	.....	1	2	....	2
...	....	....	....	....	....	2	2	1	....	1	1	1	.....	....	2	1	2

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
Wellsville	5,033	2	.....	0	.....	500.00	....	1
OLEAN	8,000	9	12.60	2	22.2	333.30	....	1
Salamanca	3,700	1	.....	0	.....	.....	....	....
DUNKIRK	10,000	16	19.20	6	37.5	187.50	....	....
JAMESTOWN	18,627	12	.....	3	25.0	330 00	1	1
Westfield	3,000	4	16.00	0	.....	.....	....	....
Fredonia	3,400	1	.....	0	.....	.....	....	....
Rest of District	.....	164	12.00	13	8.5	100.00	....	10
EAST CENTRAL DISTRICT:								
Totals	.....	400	13.40	64	16.2	97.40	3	13
SYRACUSE	95,000	110	13.15	26	23.8	110.10	....	2
Baldwinsville	3,040	.....	.....	.....	....	.....	....	....
DeWitt	5,182	8	18.50	1	12.5	.....	....	....
Cortland	8,590	10	14.00	3	30.0	300.00	....	2
Homer	3,000	2	8 00	0	.....	.....	....	....
Oneida	6,083	6	12.00	0	.....	.....	....	....
Hamilton	4,110	9	24.00	2	23.0	111.00	....	1
Cazenovia	3,803	5	15.75	2	40.0	200.00	....	....
Brookfield	3,235	4	14.00	0	.....	.....	....	....
Norwich	5,212	4	10.00	2	50.0	.....	....	....
Oneonta	6,776	6	12.00	2	50.0	250.00	....	....
Worcester	2,670	2	8.00	2	.....	.....	....	....
Cooperstown	3,000	5	20.00	2	40.0	250.00	....	....
Walton	4,811	2	8.00	0	.....	.....	....	....
Delhi	3,000	4	16.00	0	.....	.....	....	....
Liberty	3,471	3	8.00	0	.....	.....	....	....
Rest of District	.....	221	12.75	23	10.0	80.00	3	8
WEST CENTRAL DISTRICT:								
Totals	.....	303	12.00	24	8.0	70.00	1	10
AUBURN	24,737	30	14.55	3	10.0	66.70	....	2
ITHACA	13,460	9	.....	1	90.0	100.00	....	....
Hector	4,832	2	6.00	0	.....	.....	....	....
Waterloo	4,350	4	11.50	1	25.0	250.00	....	1
Seneca Falls	6,500	8	14.85	1	12.5	.....	....	....
Geneva	7,557	12	19.00	1	8.3	166.60	....	....
Canandaigua	5,868	8	16.70	0	.....	.....	....	....
Manchester	4,181	5	14.50	1	20.0	.....	....	....
Phelps	5,150	9	21.00	0	.....	110.00	....	1
Penn Yan	4,254	3	10.00	0	.....	.....	....	....
Batavia	7,221	10	16.60	0	.....	100.00	....	1
Dansville	3,758	8	24.00	0	.....	125.00	....	1
Le Roy	3,000	2	8.00	0	.....	500.00	....	....
Warsaw	4,700	5	13.00	1	20.0	600.00	....	....
Rest of District	.....	188	11.00	16	8.5	35.00	1	4
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	803	13.75	197	24.6	166.25	1	22
BUFFALO	335,709	346	12.37	116	33.5	200.00	1	13
TONAWANDA	7,145	16	26.00	8	50.0	250.00	....	....
Amherst	3,960	4	12.50	0	.....	.....	....	....
North Tonawanda	4,500	6	15.00	2	33.0	166.70	....	....
LOCKPORT	16,088	20	15.00	6	30.0	100.00	....	....
NIAGARA FALLS	16,000	20	15.00	5	25.0	350.00	....	1
Medina	4,500	4	12.00	0	.....	.....	....	....
Albion	4,536	5	13.00	0	.....	.....	....	....
Brockport	3,742	4	13.00	0	.....	.....	....	....

'OR NOVEMBER— (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	....	....
...	....	....	1	....	....	....	1	.....	.....	....	.....	....	1	2	....	....	2	11
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	....	....
...	....	....	....	....	....	1	2	1	1	2	1	....	4	.....	....	....	....	4
...	....	....	....	1	....	1	.....	.....	.....	....	1	1	1	1	....	1	2	1
...	....	....	....	....	....	....	.....	.....	.....	....	.....	1	1	1	....	....	1	....
...	....	....	....	....	....	....	.....	1	.....	....	.....	....	.....	.....	....	....	....	....
1	....	1	....	....	....	1	3	15	14	1	16	8	21	20	8	11	21	13
...	....	7	1	1	1	12	2	51	43	1	33	25	52	53	21	19	33	29
...	....	4	....	1	....	5	.....	18	14	....	15	4	11	11	4	7	6	8
...	....	....	....	....	....	....	.....	2	2	....	1	1	.....	.....	....	1	1	....
...	....	....	....	....	....	1	.....	.....	2	....	.....	1	.....	.....	....	....	....	4
...	....	....	....	....	....	....	.....	2	.....	....	.....	....	.....	.....	....	....	....	....
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...	....	....	....	....	....	....	.....	1	.....	....	2	1	.....	3	....	1	1	....
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...	....	....	....	....	....	1	.....	1	1	....	1	1	.....	1	....	....	1	1
...	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	....	2
...	....	1	....	....	....	....	.....	1	.....	....	.....	1	1	.....	1	....	....	....
...	....	....	....	....	....	....	.....	1	....	....	.....	....	.....	.....	1	....	....	....
...	....	....	....	....	....	....	.....	.....	1	....	.....	1	.....	1	....	....	1	....
...	....	1	1	....	1	5	1	24	20	1	14	14	37	33	12	10	21	14
2	....	....	....	....	....	5	2	29	25	4	30	23	40	45	10	12	44	21
...	....	....	....	....	....	....	.....	4	3	....	3	1	2	5	3	3	1	3
...	....	....	....	....	....	....	1	.....	1	....	.....	....	3	1	....	....	1	2
...	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	....	2	....
...	....	....	....	....	....	....	.....	.....	.....	....	.....	1	.....	1	....	....	....	1
1	....	....	....	....	....	1	.....	1	3	....	1	1	.....	.....	....	1	3	1
...	....	....	....	....	....	....	.....	2	1	....	4	....	1	.....	....	....	....	1
...	....	....	....	....	....	....	.....	.....	.....	....	2	1	.....	.....	....	....	2	....
...	....	....	....	....	....	....	.....	.....	.....	....	.....	1	.....	.....	....	....	3	1
...	....	....	....	....	....	....	.....	1	.....	....	.....	2	1	1	....	....	3	....
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	2	....
...	....	....	....	....	....	....	.....	.....	1	....	2	1	1	2	....	....	1	1
...	....	....	....	....	....	....	.....	1	.....	....	.....	....	2	1	1	....	1	1
1	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	.....	....	1	....	....
...	....	....	....	....	....	2	1	.....	.....	....	1	....	.....	.....	....	1	....	....
...	....	....	....	....	....	2	.....	20	15	3	17	15	30	34	6	6	25	10
1	....	2	9	1	4	66	17	121	84	8	53	41	73	101	32	45	47	65
...	....	....	1	1	3	42	9	55	31	4	18	18	31	44	15	20	12	26
...	....	....	3	....	....	1	.....	2	3	....	.....	....	1	1	....	1	1	3
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	1	1	....	....	1	....
...	....	....	2	....	....	1	.....	3	.....	....	1	....	.....	.....	....	....	1	....
...	....	....	2	....	....	....	.....	3	5	....	1	....	1	1	1	1	2	3
...	....	1	1	....	....	4	.....	.....	.....	....	2	....	3	2	1	....	1	4
...	....	....	....	....	....	....	.....	.....	.....	1	1	....	.....	.....	....	....	....	2
...	....	....	....	....	....	....	.....	1	1	....	.....	....	.....	2	....	....	1	....
...	....	....	....	....	....	....	.....	.....	1	....	.....	2	.....	.....	....	....	1	.....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT—(*Continued*):								
ROCHESTER	160,000	176	13.20	32	18.5	125.00	....	9
Palmyra	4,173	2	.....	0	.....	.....	....	....
Newark	3,000	6	24.00	0	.....	.....	....	....
Lyons	6,127	4	8.00	0	.....	250.00	....	1
Clyde	3,000	3	12.00	0	.....	.....	....	....
OSWEGO	21,966	21	11.50	2	9.5	180.00	....	....
Fulton	4,214	5	14.75	0	.....	.....	....	....
Richland	3,638	2	8.00	0	.....	.....	....	....
Rest of District	.....	159	10.00	26	16.4	150.00	....	8
Totals for the State	.....	8,372	15.50	2,287	27.4	134.62	24	204
Average for Nov. for past 10 years.	.....	7,627	.....	2,220	29.1	165.00	32	176
Totals for October, 1895	.....	9,320	17.20	2,951	31.5	167.00	36	265

REMARKS.—November is invariably the month of lowest mortality of the year, the average this present month, that of the preceding ten months of 1895 having been 340. There were 200 15.50. The infant mortality (under five years of age) was 27.4 per cent., which is the same as that zymotic mortality has decreased from 16.7 per cent. of the total deaths to 13.5, and is below much less, being 5.8 per cent. of the total against 8.5; there has been a smaller increase than of a year ago, except from measles, which shows a marked increase, and to a less degree from the number reported in October; it has been especially prevalent in New York, Brooklyn and of over 100,000 population 2.4 deaths per 100,000 population; in the rest of the State there were rest of the State there were 5.0. There were 17.2 deaths per 100,000 population in the large deaths from this cause than other months of the year. Deaths from acute respiratory dis- this month. The temperature was above the normal, the percentage of humidity being high, winds of moderate velocity.

FOR NOVEMBER — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
....	....	1	....	....	....	7	5	31	16	1	14	7	19	19	9	12	9	17
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	1	....	....
....	....	....	....	....	....	....	.....	.....	1	....	1	1	.....	1	1	1	....	....
....	....	....	....	....	....	....	.....	1	.....	....	1	....	.....	1	....	....	....	....
....	....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	1	....	....	....	1
....	....	....	....	....	....	4	....	1	4	....	.....	3	3	3	1	1	1	....
....	....	....	....	....	....	....	.....	.....	2	....	1	....	1	.....	....	....	....	1
....	....	....	....	....	....	....	.....	.....	1	....	.....	....	.....	.....	....	....	1	....
1	....	....	2	....	1	7	3	24	15	2	13	10	12	25	4	8	16	8
43	....	51	96	18	57	483	150	1,348	979	71	583	584	750	798	263	473	370	1027
61	7	104	54	21	54	617	132	1,153	957	62	470	463	569	799	206	339	452	880
50	2	36	46	13	95	458	554	749	1,112	67	761	630	767	840	319	511	445	1564

number of deaths daily for the month being for the past ten years 280, which is the average for more deaths than in November, 1894. There was an annual death rate per 1,000 population of of the corresponding period for the last two years, that of October having been 31.5. The the average for this month. Compared with last November the deaths from diphtheria are usual since October. From other zymotic diseases the mortality is almost identical with that typhoid fever and malarial diseases. There were 96 deaths from measles, which is double Albany, in which 74 of the deaths occurred. From typhoid fever there were in the five cities 4.0. From diphtheria there were 9.0 deaths per 100,000 population in these large cities; in the cities from consumption, against 12.0 in the rest of the State. June and November have fewer cases are nearly double the number occurring in October, though not above the average for as also the dew point, the rainfall being a little above the average, with southerly and westerly

MONTHLY BULLETIN OF THE NEW

Abstract of reports of deaths and causes in the following

[Cities are printed in SMALL CAPITALS, villages in *italics* and towns in Roman

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
MARITIME DISTIRICT: Totals	.....	5,779	19.00	2,042	35.3	145.32	14	58
NEW YORK CITY	1,995,000	3,286	19.41	1,219	37.1	131.75	7	35
BROOKLYN	1,100,000	1,986	25.20	677	34.0	165.00	6	20
LONG ISLAND CITY	35,745	82	25.20	25	30.5	834.15	....	....
Newtown	19,776	42	25.20	19	45.2	214.30	1	....
Oyster Bay	14,887	12	.....	2	.....	.....	....	....
Hempstead	23,991	38	19.00	10	26.3	79.00	....	....
North Hempstead	8,726	8	12.00	2	25.0	.....	....	....
Jamaica	17,654	34	24.00	13	35.4	260.00	....	....
Flushing	20,816	26	15.00	7	27.0	154.00	....	1
Southold	7,671	11	17.16	2	18.2	91.00	....	....
Sag Harbor	3,000	4	16.01	3	75.0	250.00	....	....
Huntington	8,253	11	.....	3	.....	.....	....	....
Brookhaven	13,493	6	.....	1	.....	.....	....	....
New Brighton	17,261	24	16.80	4	16.7	85.00	....	....
Edgewater	15,000	23	18.40	9	39.0	260.00	....	....
Port Richmond	6,390	12	22.50	5	41.7	500.00	....	....
Westfield	8,648	4	.....	0	.....	.....	....	....
YONKERS	35,000	.....	.....	.....	.....	.....	....	....
Greenburgh	11,630	11	12.00	2	18.2	91.00	....	....
MOUNT VERNON	15,531	24	18.57	8	33.3	83.30	....	....
Port Chester	5,274	6	14.00	0	.....	.....	....	....
Sing Sing	9,352	9	12.00	1	11.0	222.20	....	1
New Rochelle	8,211	2	.....	0	.....	.....	....	....
Peekskill	9,676	14	17 36	4	28.5	71.40	....	....
White Plains	4,042	5	15.00	.....	20.0	.....	....	....
Rest of District	.....	99	.....	25	.....	.....	....	....
HUDSON VALLEY DISTRICT: Totals	.....	1,056	19.00	286	26.8	162.50	7	46
ALBANY	100,000	268	.....	99	36.9	270.00	2	21
COHOES	23,234	38	19.10	10	26.3	184.20	1	4
TROY	65,000	137	24.66	43	31.5	175.00	2	3
West Troy	12,966	22	20.30	8	36.4	225.00	....	3
Green Island	4,463	1	.....	1	.....	.....	....	....
Lansingburgh	10,550	21	23.85	3	15.0	285.00	....	2
Hoosick Falls	7,014	7	12.00	1	12.5	.....	....	....
Greenbush	7,462	17	27.94	7	41.0	295.00	....	1
Coxsackie	3,824	4	13.00	1	25.0	.....	....	....
Catskill	4,920	7	17.00	2	28.5	285.00	....	....
HUDSON	9,633	12	15.00	3	25.0	83.30	....	....
KINGSTON	21,500	41	22.50	8	19.5	50.00	....	....
Ellenville	3,000	5	20.00	1	20.0	200.00	....	....
Marbletown	3,609	5	16.00	0	.....	.....	....	....
Rosendale	6,125	3	.....	2	.....	.....	....	....
Esopus	5,035	6	14.50	3	50.0	.....	....	....
Saugerties	4,237	2	6.00	0	.....	.....	....	....
POUGHKEEPSIE	23,200	37	19.13	5	13.5	81.00	....	....
Fishkill	11,726	16	16.35	4	25.0	125.00	1	....
Wappinger Falls	3,718	10	30.00	2	20.0	100.00	....	....
NEWBURGH	24,536	38	18.62	17	44.8	52.50	....	2
Port Jervis	9,327	13	16.64	2	16.5	82.50	....	....
MIDDLETOWN	11,612	20	20.20	2	10.0	150.00	....	2
Warwick	6,000	9	18.00	3	33.0	.....	....	....
Goshen	4,646	6	15.50	1	16 7	.....	....	....
Montgomery	5,229	6	13.68	0	.....	.....	....	....

YORK STATE BOARD OF HEALTH.

districts, cities and towns, during December, 1895.

type. For boundaries of *Sanitary Districts*, see Annual Summary.]

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
28	....	53	110	20	57	429	71	1,206	675	54	312	387	515	404	165	321	106	74
8	....	35	83	11	30	176	46	757	419	41	174	218	230	238	85	213	42	437
19	....	15	23	8	15	208	15	366	195	10	108	144	230	102	59	92	37	314
....	....	....	....	....	....	8	3	16	6	1	5	5	4	16	2	6	5	5
....	....	....	....	....	2	6	.....	7	6	....	5	....	4	5	1	2	1	2
....	....	....	....	....	....	....	.....	3	.....	....	.....	1	2	2	2	....	1	1
....	....	1	....	....	....	2	.....	2	4	....	.....	4	7	7	2	1	3	5
....	....	....	....	....	....	....	.....	....	2	....	1	....	2	3	....	....	....	....
....	....	2	....	....	....	7	.....	7	6	....	.....	....	5	3	....	....	2	2
....	....	....	....	....	....	3	.....	3	7	....	1	1	1	3	3	1	1	1
1	....	....	....	....	....	....	.....	....	3	1	.....	....	2	.....	....	1	1	2
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....	....	....	....	....	1	....	.....	2	2	....	1	1	3	1	....	....	....	....
....	....	....	1	....	....	....	.....	....	....	....	1	....	1	.....	1	....	2	....
....	....	....	....	....	....	2	.....	7	1	....	4	2	3	....	2	....	1	2
....	....	....	....	....	....	5	1	2	4	....	3	....	2	1	....	....	1	4
....	....	....	3	....	2	1	.....	2	1	....	.....	....	.....	2	....	....	....	1
....	....	....	....	....	....	1	.....	....	....	....	.....	....	1	.....	....	1	....	1
....	....	....	....	....	....	....	.....	2	....	....	.....	....	3	2	1	....	1	1
....	....	....	....	....	....	2	.....	3	2	....	1	1	4	3	2	....	1	5
....	....	....	....	....	....	....	.....	2	1	....	.....	1	.....	1	....	1	....	....
....	....	....	....	....	....	1	.....	3	1	....	1	....	1	.....	....	1	....	1
....	....	....	....	....	....	....	.....	....	....	....	.....	....	1	1	....	....	....	....
....	....	....	....	....	....	1	.....	4	2	....	2	1	2	1	1	....	....	....
....	....	....	....	....	....	....	.....	2	....	....	.....	....	....	2	....	....	1	....
....	....	....	....	1	6	5	6	14	13	1	5	8	8	11	4	1	6	10
2	....	3	48	4	4	39	17	195	116	5	70	63	98	122	26	34	58	99
....	....	1	33	1	....	6	9	49	28	1	16	16	23	26	6	4	5	21
....	....	....	....	....	....	1	1	13	2	....	1	2	1	2	....	3	3	4
....	....	1	12	....	....	6	.....	28	16	....	8	2	14	17	4	5	2	10
....	....	1	....	....	....	1	.....	5	1	....	1	2	1	4	....	....	1	2
....	....	....	....	....	....	1	.....	....	....	....	.....	....	....	....	....	....	....	....
....	....	....	....	....	1	3	.....	1	4	....	2	1	1	.....	....	3	2	1
....	....	....	....	....	....	....	.....	1	1	1	.....	....	.....	1	....	....	1	2
....	....	....	1	1	....	....	2	3	1	....	2	....	1	1	1	....	....	3
....	....	....	....	....	....	....	.....	1	2	....	.....	....	1	.....	....	....	....	....
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....	....	....	....	....	....	1	.....	1	2	....	1	....	1	1	1	....	2	2
....	....	....	....	....	1	1	.....	9	2	1	5	4	10	3	....	3	2	....
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....	....	....	....	....	1	....	.....	2	1	....	1	2	1	4	1	....	1	1
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....	....	....	....	....	....	....	.....	13	7	....	3	3	3	3	1	1	....	2
....	....	....	....	....	....	1	.....	1	2	....	1	....	2	2	....	....	2	2
....	....	....	....	....	....	1	.....	1	5	....	2	....	4	1	....	2	1	1
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....	....	....	....	....	....	....	.....	1	.....	....	1	....	1	3	....	....	....	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
HUDSON VALLEY DIST.—(*Cont'd*):								
Haverstraw	7,714	12	18.70	4	33.0	83.50	....	1
Nyack	5,603	6	13.00	4	66.7	330.00	....	....
Ramapo	6,660	4	11.00	3	75.0	250.00	....	....
Rest of District	.....	283	.....	47	.....	.....	1	7
ADIRONDACK & NORTHERN DIST.:								
Totals	.....	308	11.00	59	20.0	120.00	3	10
WATERTOWN	16,982	33	28.80	5	14.0	218.00	....	2
Ellisburgh	4,223	3	10.00	0	.....	.....	....	....
Cape Vincent	3,000	4	16.00	0	.....	.....	....	....
Clayton	4,250	1	.....	0	.....	.....	....	....
OGDENSBURG	11,959	20	20.00	6	30.0	100.00	....	1
Gouveneur	5,921	1	.....	.....	.....	.....	....	....
Potsdam	4,000	5	15.00	0	.....	200.00	....	....
Canton	6,013	2	.....	0	.....	.....	....	....
Malone	5,000	1	.....	0	.....	.....	....	....
Plattsburgh	7,010	8	15.37	3	37.5	250.00	....	1
Glens Falls	10,000	15	18.00	5	33.0	200.00	....	....
Whitehall	4,434	.....	.....	.....	.....	.....	....	....
Fort Edward	4,382	7	19.10	1	14.5	.....	....	....
Kingsbury	5,112	9	21.15	1	11.0	.....	....	....
Granville	5,281	4	9.10	1	33.0	.....	....	....
Salem	3,167	6	14.00	0	.....	.....	....	....
Greenwich	4,431	1	.....	0	.....	.....	....	....
Rest of District	.....	200	10.00	37	18.5	100.00	3	3
MOHAWK VALLEY DISTRICT:								
Totals	.....	426	15.00	66	15.6	66.35	2	9
SCHENECTADY	22,858	29	19.22	6	20.0	160.00	1	3
Cobleskill	3,436	3	11.00	0	.....	.....	....	....
AMSTERDAM	18,542	25	16.17	8	32.0	.....	....	....
Fort Plain	3,000	2	8.00	0	.....	.....	....	....
JOHNSTOWN	7,768	12	18.50	3	25.0	166.70	....	1
GLOVERSVILLE	14,694	16	13.00	4	25.0	125.00	....	....
LITTLE FALLS	12,000	13	13.00	0	.....	77.00	....	....
Herkimer	5,150	7	16.75	0	.....	.....	....	....
Ilion	4,057	4	12.00	1	25.0	.....	....	....
UTICA	46,608	69	.....	13	.....	.....	....	....
Whitestown	5,225	1	.....	0	.....	.....	....	....
ROME	13,638	10	10.00	1	10.0	.....	....	....
Boonville	3,512	5	17.00	1	20.0	.....	....	....
Camden	3,675	4	13.40	1	25.0	.....	....	....
Waterford	5,522	11	.....	.....	.....	.....	....	....
Mechanicville	3,000	8	30.00	0	.....	125 00	....	....
Ballston Spa	3,527	4	13.60	0	.....	.....	....	1
Saratoga Springs	12,000	27	27.00	2	7.5	37.50	....	....
Rest of District	.....	176	13.00	26	15.0	80.00	1	4
SOUTHERN TIER DISTRICT:								
Totals	.....	358	12.00	51	14.2	100.00	1	11
BINGHAMTON	34,514	50	17.38	13	26.0	160.00	....	2
Owego	6,000	8	16.00	0	.....	.....	....	....
Candor	3,525	4	13.60	0	.....	.....	....	....
Waverly	4,123	6	17.10	1	16.6	167.00	....	....
ELMIRA	30,000	29	12.00	2	7.0	130.00	....	2
Horseheads	3,319	4	14.40	1	25.0	.....	....	....
HORNELLSVILLE	11,898	7	.....	0	.....	.....	....	....
Bath	3,261	3	12.00	1	33.0	.....	....	....
CORNING	10,025	5	.....	1	.....	.....	....	1

OR } DECEMBER — (*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	....	....	....	....	2	.....	4	.....	....	.....	2	2	1	....	....	....	4
...	....	....	....	....	....	2	.....	.....	.....	....	.....	.....	.....	.....	....	....	....	2
2	....	....	2	....	1	1	.....	.....	1	....	.....	.....	.....	1	....	....	....	1
						9	5	50	25	1	17	16	25	40	9	9	30	34
1	....	4	1	1	2	11	1	39	30	4	23	20	36	38	15	19	28	22
...	....	3	1	....	1	1	.....	2	2	....	4	5	1	4	4	1	2	....
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...	....	....	....	....	....	....	.....	.....	1	....	.....	....	2	2	....	....	1	....
1	....	3	1	....	2	7	.....	26	17	3	14	14	23	29	12	11	18	13
...	...	4	1	1	1	4	7	48	58	1	29	24	51	59	16	21	48	42
...	....	....	....	....	1	....	.....	.....	4	....	4	....	6	3	....	....	1	4
...	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	2	....	1	....
...	....	....	....	....	....	....	.....	6	3	....	2	3	4	3	1	1	1	2
...	....	....	....	....	....	....	.....	.....	1	....	.....	.....	.....	.....	....	....	1	....
...	....	....	1	....	....	....	.....	1	.....	....	1	1	.....	2	....	2	2	1
...	....	....	....	....	....	1	1	2	3	....	.....	1	1	3	....	....	1	4
...	....	1	....	....	....	....	.....	2	2	....	.....	....	.....	1	.	3	1	1
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...	....	3	....	1	....	1	1	4	7	....	1	2	1	3	....	1	4	3
...	....	3	....	1	....	1	4	16	22	....	13	11	19	27	7	5	27	15
1	....	....	7	2	....	12	1	46	23	3	28	26	44	53	16	24	36	24
...	....	....	....	....	....	6	.....	7	4	1	2	4	12	7	....	2	2	1
...	....	....	....	....	....	....	.....	1	.....	....	.....	....	.....	4	....	....	1	2
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	1	.....	....	....	1	1
...	....	....	....	....	....	1	.....	2	1	....	.....	....	1	.....	....	....	....	1
...	....	....	....	....	....	2	.....	2	4	....	3	3	4	2	....	6	1	....
...	....	....	....	....	....	....	.....	.....	.....	....	.....	1	.....	.....	....	2	....	1
1	....	....	....	....	....	....	.....	1	.....	....	1	....	1	1	1	....	1	....
...	....	....	....	....	....	....	.....	2	.....	....	.....	....	.....	1	....	....	....	....
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SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro spinal meningitis.	Typhoid fever.
SOUTHERN TIER DIST.—(*Cont'd*):								
Wellsville	5,033	.....	.....	.....	.....	.....	....	....
OLEAN	8,000	7	11.00	3	42.8	285.00	....	....
Salamanca	3,700	5	16.00	0	.....	.....	....	....
DUNKIRK	10,000	7	.....	1	.....	.....	....	....
JAMESTOWN	18,627	22	14.20	3	12.5	.....	....	....
Westfield	3,000	4	16.00	1	25.0	.....	....	....
Fredonia	3,400	6	21.15	3	50.0	167.00	....	1
Rest of District	.....	201	15.50	21	10.0	65.00	....	4
EAST CENTRAL DISTRICT:								
Totals	.....	370	12.50	55	15.0	76.00	....	5
SYRACUSE	95,000	111	14.00	24	21.6	126.10	....	6
Baldwinsville	3,040	6	24.00	0	.....	.....	....	....
DeWitt	5,182	7	16.17	0	.....	.....	....	....
Cortland	8,590	13	18.14	2	15.4	153.50	....	1
Homer	3,000	1	.....	0	.....	.....	....	....
Oneida	6,082	3	6.00	0	.....	.....	....	....
Hamilton	4,110	3	9.00	0	.....	.....	....	....
Cazenovia	3,803	3	10.00	0	.....	.....	....	....
Brookfield	3,235	1	.....	0	.....	.....	....	....
Norwich	5,212	5	12.00	0	.....	.....	....	....
Oneonta	6,776	7	13.40	0	.....	.....	....	....
Worcester	2,670	4	16.00	0	.....	.....	....	....
Cooperstown	3,000	1	.....	0	.....	.....	....	....
Walton	4,811	7	17.50	2	28.5	.....	....	....
Delhi	3,000	3	12.00	0	.....	330.00	....	....
Liberty	3,471	4	13.85	2	50.0	250.00	....	....
Rest of District	.....	194	11.50	25	18.5	60.00	....	1
WEST CENTRAL DISTRICT:								
Totals	.....	284	12.00	38	14.5	111.75	2	10
AUBURN	24,737	30	14.55	12	40.0	200.00	....	2
ITHACA	13,460	10	10.00	0	.....	.....	....	....
Hector	4,832	3	10.00	1	33.0	.....	....	....
Waterloo	4,350	6	16.00	0	.....	.....	....	....
Seneca Falls	6,500	12	22.20	2	16.7	.....	....	....
Geneva	7,557	12	19.00	2	16.7	166.70	....	....
Canandaigua	5,868	8	16.88	1	12.5	.....	....	....
Manchester	4,181	3	10.00	0	.....	.....	....	....
Phelps	5,150	2	.....	0	.....	.....	....	....
Penn Yan	4,254	3	10.00	0	.....	330.00	....	1
Batavia	7,221	10	16.60	2	20.0	.....	....	....
Dansville	3,758	4	12.76	1	25.0	250.00	....	1
Le Roy	3,000	4	16.00	0	.....	250.00	....	1
Warsaw	4,700	8	20.40	4	50.0	500.00	....	....
Rest of District	.....	169	10.50	13	8.0	100.00	2	5
LAKE ONTARIO AND WESTERN DISTRICT:								
Totals	.....	857	14.00	175	20.6	114.65	2	17
BUFFALO	335,709	326	11.65	91	27.9	168 75	....	11
TONAWANDA	7,145	10	17.15	3	30.0	100.00	....	....
Amherst	3,960	8	24.00	0	.....	125.00	....	1
North Tonawanda	4,800	4	10.00	1	25.0	250.00	....	....
LOCKPORT	16,088	29	21.75	6	20.0	100.00	....	....
NIAGARA FALLS	16,000	19	14.25	12	63.2	473.60	1	1
Medina	4,500	4	11.00	0	.....	.....	....	....
Albion	4,536	4	11.00	0	.....	.....	....	....
Brockport	3,742	5	15.00	0	.....	.....	....	....

OR DECEMBER—(*Continued*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	.....	2	....	....	....	.....	1	.....	....	.....	....	1	.....	....	1	....	2
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...	....	.....	5	1	....	2	1	28	10	1	14	16	20	35	15	10	27	12
1	....	6	2	1	2	5	3	46	33	....	37	29	52	47	18	23	27	30
1	....	5	....	1	1	....	.....	15	12	....	6	7	15	15	7	5	3	12
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...	....	2	....	2	2	12	1	37	28	....	28	16	37	36	15	12	28	16
...	....	2	....	....	2	....	.....	3	2	....	2	4	.....	8	2	....	1	2
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...	....	....	....	....	....	....	.....	.....	1	....	1	....	1	.....	....	.....	.....	....
...	....	....	....	....	....	....	.....	1	.....	....	.....	1	.....	1	....	.....	.....	....
...	....	....	....	1	....	4	.....	.....	.....	....	.....	....	1	2	1	.....	.....	....
...	....	....	....	1	....	8	.....	24	15	....	21	8	30	16	9	6	16	8
1	....	3	3	3	4	51	14	123	91	12	69	44	98	107	35	56	168	76
...	....	1	1	....	1	33	8	50	36	4	21	20	38	39	9	23	12	20
...	....	....	....	....	....	1	.....	1	.....	....	1	....	3	1	....	....	1	2
...	....	....	....	....	....	....	.....	.....	1	....	.....	....	1	1	1	2	1	....
...	....	....	....	....	....	1	.....	.....	.....	....	.....	....	1	.....	....	2	.....	....
...	....	....	....	....	....	....	1	7	4	....	6	....	5	3	....	1	1	1
...	....	....	1	....	....	2	2	4	.....	....	2	1	.....	2	....	2	....	1
...	....	....	....	....	....	....	.....	.....	1	....	1	....	1	1	....	....	....	....
...	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	2	....	....	1
...	....	....	....	....	....	....	.....	.....	1	....	1	1	.....	1	....	....	1	....

SANITARY DISTRICTS.	Population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.
LAKE ONTARIO AND WESTERN DISTRICT — *(Continued)*:								
ROCHESTER	160,000	194	13.00	22	11.7	63.10	1	1
Palmyra	4,173	3	9.00	0	.....	.....	....	....
Newark	3,000	1	.....	0	.....	.....	....	....
Lyons	6,127	11	21.00	3	28.3	.....	....	....
Clyde	3,000	5	20.00	1	20.0	200.00	....	1
OSWEGO	21,966	28	15.00	7	25.0	214.30	....	....
Fulton	4,214	7	20.50	2	28.5	142.80	....	....
Richland	3,637	2	8.00	0	.....	.....	....	....
Rest of District	.....	197	10.00	27	14.2	58.0	....	....
Totals for the State	.....	9,438	18.00	2,772	29.5	134.00	31	19
Average for Dec. for past 10 years.	.....	8,766	.....	2,590	28.0	145.00	35	13
Totals for November, 1895	.....	8,372	15.50	2,287	27.4	134.62	24	20

REMARKS.—There were 9,438 deaths reported during December, which is 1,000 more than for of reported deaths is 500 greater than that of the same month in 1894, and in excess of the mortality is higher by one per cent. of the total deaths; the zymotic mortality is also a little Measles is still mostly limited to the eastern part of the State, all but 14 of the 172 deaths mortality, mainly in the maritime district, where there were 57 deaths of the 72 in the entire trict reports more deaths than in November. From diphtheria there were fewer deaths than average of the past 10 years. The increase in mortality over both that of the month preced system. Deaths have been reported during the month from grippe and it is probable that the a disturbing factor in the mortality of December, 1894), and it may be estimated that there above the average for the month, 1,054 deaths. There was an unusual mortality from

OR DECEMBER — (*Concluded*).

Malarial diseases.	Small pox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
...	....	1	....	2	1	4	1	30	22	4	18	12	16	27	10	8	23	19
..	....	....	....	....	....	....	.....	.....	.....	....	.....	....	1	.....	1	....	1	....
..	....	....	....	....	....	....	.....	.....	.....	....	.....	....	.....	1	....	....	....	....
..	....	....	....	....	....	....	.....	2	2	....	.....	1	.....	.....	....	4	1	2
..	....	....	....	....	....	....	.....	.....	1	....	.....	1	1	.....	....	....	....	1
..	....	....	....	....	....	6	.....	2	3	2	4	1	5	.....	2	2	....	1
..	....	....	....	....	....	....	1	.....	.....	1	.....	....	1	3	....	....	....	1
..	....	....	....	....	....	....	.....	1	.....	....	.....	1	.....	.....	....	....	....	....
1	....	1	1	1	2	4	1	26	20	1	15	7	25	27	10	13	27	15
34	....	75	172	34	72	563	115	1,740	1,054	79	506	609	931	866	306	510	399	1083
33	10	50	95	31	68	653	100	1,687	1,058	78	484	493	640	953	237	322	546	924
93	....	151	96	18	57	483	150	1,348	979	71	583	584	750	798	263	473	370	1027

he month preceding, with an average daily mortality of 305 against one of 280. The number verage for the past 10 years to the same amount. Compared with December, 1894 the infant igher The only zymotic diseases showing an increase are measles and whooping cough. ccurring in the maritime and Hudson valley districts. Whooping cough has a little larger tate. Typhoid fever caused 169, which is excessive for December; the Hudson valley dis- ave ever been reported in December, save in 1890, the 560 deaths being 100 less than the ag and of December, 1894, is in acute respiratory diseases and in diseases of the circulatory eported increase in acute respiratory mortality is due to this cause (it not having entered as ere 250 deaths from grippe during the month. The mortality from consumption was not ccidents and violence.

SUMMARY OF MORTALITY OF THE STATE OF NEW YORK, FOR THE YEAR 1895, AS PUBLISHED IN THE MONTHLY BULLETIN.

TOTALS OF MORTALITY OF THE STATE BY MONTHS.

1895.	Total number of deaths.	Representing annual daily death rate of—	Deaths under five years.	Percentage of deaths under five years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
January	10,980	354	3,132	28.6	100.40	51	108	30	3	103	34	38	78
February	10,771	384	3,049	28.3	85.40	40	99	9	5	98	44	38	87
March	11,379	367	3,340	29.4	98.00	53	99	23	.....	131	99	51	83
April	10,545	351	3,506	33.3	115.70	78	115	32	.....	118	133	62	107
May	9,452	308	2,888	30.5	116.00	46	92	38	1	83	183	36	77
June	8,736	293	3,114	35.6	175.25	40	81	35	.....	71	217	28	95
July	11,681	377	5,841	50.0	326.21	49	108	26	.....	32	130	20	143
August	11,050	357	4,962	45.0	282.75	46	156	39	.....	26	76	17	156
September	10,011	337	4,161	41.5	250.00	52	220	50	.....	26	36	15	119
October	9,320	300	2,951	31.5	167.00	36	265	50	2	36	46	13	95
November	8,372	280	2,287	27.4	134.62	24	204	43	.....	51	96	18	57
December	9,438	305	2,772	29.5	134.00	31	169	34	.....	75	172	34	72
Totals for first quarter	33,130	368	9,521	28.7	95.00	144	806	62	8	332	177	127	248
Totals for second quarter	28,733	316	9,508	33.1	135.65	164	288	105	1	272	533	126	279
Totals for third quarter	32,742	360	14,964	45.5	286.32	147	484	115	.....	84	242	52	418
Totals for fourth quarter	27,130	300	8,010	29.5	145.20	91	638	127	2	162	314	65	224
Totals for the year	121,735	336	42,003	34.5	165.55	546	1,716	409	11	850	1,266	370	1,169

TOTALS OF MORTALITY OF THE STATE BY MONTHS—(*Concluded*).

1895.	Croup and diphtheria.	Diarrhoeal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhoeal).	Disease of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
January	547	108	2,578	1,244	81	617	622	916	1,037	290	403	506	1,586
February	391	107	2,526	1,161	93	600	670	917	1,035	281	351	598	1,621
March	445	137	2,395	1,274	104	691	721	971	1,160	312	417	714	1,499
April	424	151	2,135	1,220	83	666	653	917	1,017	282	433	494	1,425
May	390	157	1,459	1,149	83	628	669	903	1,022	270	503	413	1,250
June	338	627	825	974	63	665	592	718	927	275	620	357	1,188
July	323	2,974	627	1,040	83	1,135	599	732	1,000	312	549	364	1,425
August	305	2,303	668	1,051	67	1,027	523	741	1,034	357	597	457	1,404
September	322	1,672	675	1,009	65	923	577	703	988	277	522	452	1,308
October	458	554	749	1,112	67	761	630	767	840	319	511	445	1,564
November	483	150	1,348	979	71	583	584	750	798	263	473	370	1,027
December	563	115	1,740	1,054	79	596	609	931	866	306	510	399	1,083
Totals for first quarter	1,383	352	7,499	3,679	278	1,908	2,013	2,804	3,232	883	1,171	1,818	4,706
Totals for second quarter	1,152	935	4,419	3,343	229	1,959	1,914	2,538	2,966	827	1,556	1,264	3,863
Totals for third quarter	950	6,949	1,970	3,100	215	3,085	1,699	2,176	3,022	956	1,668	1,273	4,137
Totals for fourth quarter	1,504	819	3,837	3,145	217	1,940	1,823	2,448	2,504	888	1,494	1,214	3,674
Totals for the year	4,989	9,055	17,725	13,267	939	8,892	7,449	9,966	11,724	3,554	5,889	5,569	16,380

TOTALS OF MORTALITY IN THE SEVERAL SANITARY DISTRICTS FOR THE YEAR.

DISTRICTS.	Reporting population.	Total number of deaths.	Representing annual death rate per 1,000 of—	Deaths under five years.	Percentage of deaths under 5 years to total deaths.	Zymotic deaths per 1,000 deaths from all causes.	Cerebro-spinal meningitis.	Typhoid fever.	Malarial diseases.	Smallpox.	Scarlet fever.	Measles.	Erysipelas.	Whooping cough.
Maritime	3,500,000	74,246	21.20	30,303	40.8	181.10	335	566	281	11	626	1,023	238	853
Hudson Valley	650,000	12,148	18.70	3,217	26.4	161.00	70	402	49	.....	84	96	34	110
Adirondack and Northern	350,000	4,263	13.00	904	21.2	93.20	18	108	4	.....	39	2	9	22
Mohawk Valley	350,000	5,358	15.30	1,133	21.2	106.70	24	106	7	.....	25	1	16	36
Southern Tier	400,000	4,760	12.00	930	20.0	117.20	15	118	13	.....	7	13	18	33
East Central	350,000	5,422	15.50	1,087	20.0	108.85	24	107	17	.....	33	4	15	25
West Central	300,000	4,019	13.40	573	14.5	97.00	13	82	13	.....	8	5	14	18
Lake Ontario and Western	750,000	11,519	15.50	3,534	30.7	308.30	47	227	24	.....	38	123	26	72

TOTALS OF MORTALITY IN THE SEVERAL SANITARY DISTRICTS FOR THE YEAR—(*Continued*).

DISTRICTS.	Croup and diphtheria.	Diarrhœal diseases.	Acute respiratory diseases.	Consumption.	Puerperal diseases.	Diseases of digestive system (not diarrhœal).	Diseases of urinary system.	Diseases of circulatory system.	Diseases of nervous system.	Cancer.	Accidents and violence.	Old age.	Unclassified.
Maritime	3,830	5,992	11,683	8,319	563	5,463	4,755	5,413	5,580	1,805	3,784	1,371	11,764
Hudson Valley	340	767	1,696	1,298	79	823	711	1,026	1,634	356	476	805	1,184
Adirondack and Northern	79	226	459	488	55	323	195	445	532	173	179	480	437
Mohawk Valley	60	297	607	608	45	389	360	529	715	207	228	536	557
Southern Tier	99	242	606	413	36	370	274	485	574	182	251	559	452
East Central	71	292	655	534	31	416	316	593	682	255	294	537	552
West Central	56	179	468	398	27	350	255	461	520	162	160	493	337
Lake Ontario and Western	454	1,041	1,552	1,209	113	758	583	1,014	1,487	414	547	788	1,001

SUMMARY OF MORTALITY, ETC —(*Continued*).

DISTRICTS.	FROM TYPHOID FEVER.						FROM DIPHTHERIA.					
	1890.	1891.	1892.	1893.	1894.	1895.	1890.	1891.	1892.	1893.	1894.	1895.
In each 1,000 deaths there were in the —												
Maritime	9.26	8.81	8.50	8.75	8.00	7.60	49.10	46.41	47.90	51.14	71.27	51.58
Hudson Valley	20.36	30.47	18.86	23.65	22.50	33.00	13.30	30.96	56.36	41.65	31.28	28.00
Adirondack and Northern	13.33	19.60	19.63	20.40	22.50	25.35	37.90	34.13	29.33	40.58	27.73	18.52
Mohawk Valley	30.71	27.76	27.69	21.45	20.83	19.56	52.72	31.45	45.63	38.00	28.00	11.20
Southern Tier	23.61	28.39	21.69	21.75	26.54	26.85	35.28	41.97	50.26	60.68	39.50	20.75
East Central	18.50	26.40	14.22	18.23	22.22	19.75	22.78	17.40	31.35	46.78	30.65	13.10
West Central	17.49	17.57	14.03	15.90	16.75	10.50	16.38	8.91	19.31	43.35	16.70	14.00
Lake Ontario and Western	21.58	23.55	22.76	21.04	25.15	19.75	32.64	42.03	57.11	39.38	40.25	39.45
The entire State	13.79	15.52	13.25	13.51	13.87	14.10	42.07	40.78	46.86	48.00	55.77	41.00

SUMMARY OF MORTALITY, ETC.—(*Concluded*).

DISTRICTS.	FROM DIARRHŒAL DISEASES.						FROM CONSUMPTION.					
	1890.	1891.	1892.	1893.	1894.	1895.	1890.	1891.	1892.	1893.	1894.	1895.
In each 1,000 deaths there were in the —												
Maritime	82.58	83.29	86.10	80.00	80.00	80.75	127.72	112.11	110.60	111.80	110.00	112.00
Hudson Valley	40.64	58.97	59.56	56.67	63.15	63.10	121.92	110.00	104.13	102.20	111.20	107.00
Adirondack and Northern	43.28	69.28	45.88	42.65	57.50	53.00	108.50	111.85	106.31	105.35	115.00	114.50
Mohawk Valley	56.89	52.69	41.54	53.26	65.00	55.41	112.40	108.08	104.00	102.50	111.50	113.45
Southern Tier	52.72	53.37	41.95	50.00	57.80	50.84	89.50	88.64	86.95	77.00	81.00	86.00
East Central	57.34	68.47	46.29	48.13	64.00	55.92	108.78	106.78	97.69	96.00	108.25	98.50
West Central	44.54	37.87	28.51	37.90	40.82	45.60	106.83	105.94	101.40	105.92	118.50	99.50
Lake Ontario and Western	75.90	73.22	78.09	97.95	108.80	90.50	106.12	102.94	108.38	93.25	102.75	105.00
The entire State	72.48	74.15	72.72	73.30	75.77	74.50	118.37	109.50	106.66	105.94	108.46	109.00

REMARKS.—The sanitary districts into which the State is divided are as follows: Maritime District: Includes New York, Brooklyn, Long Island, Staten Island and Westchester county. Hudson Valley District: All the counties on either side of the Hudson river, except Westchester, to and including Albany and Rensselaer. Adirondack and Northern District: The northern section of the State—the counties of Washington, Warren, Hamilton, Essex, Clinton, Franklin, St. Lawrence, Jefferson and Lewis. Mohawk Valley District: Schenectady, Schoharie, Saratoga, Montgomery, Fulton, Herkimer and Oneida counties. Southern Tier District: The seven counties along the southern border of the State. East Central District: Sullivan, Delaware, Otsego, Madison, Chenango, Onondaga and Cortland counties. West Central District: Cayuga, Tompkins, Seneca, Schuyler, Ontario, Yates, Livingston, Genesee and Wyoming counties. Lake Ontario and Western District: Oswego, Wayne, Monroe, Orleans, Niagara and Erie counties.

There have been reported in the Monthly Bulletin during the year 121,735 deaths; this is 3,500 more than in 1894, but less than any previous year since 1890. Delayed returns, not recorded in the Bulletin, to the number of 4,500 deaths, make the actual reported mortality for the year 126,235. The estimated reporting population is 6,650,000, which makes a death rate for the year of 19.00 per 1,000 population; in 1894 it was 18.75; in 1893, 19.50; in 1892, 20.78; in 1891, 21.43; and in 1890, 19.65. There was an average daily mortality of 336, against 324 in 1894, and 340 in 1893. The maritime district had a death rate per 1,000 population of 21.20; the Hudson valley, of 18.70; the Mohawk valley, the east central and the Lake Ontario and western districts, each of about 15.50, while the other more sparsely settled and perhaps not fully reporting districts have a rate of from 12.00 to 13.40 deaths per 1,000 population.

The morality under the age of five years was 34.5 per cent. of the total; for the past six years this has varied from 31.6 to 38.6. In the summer months 45.5 of the deaths occurred in early life, in the spring 33.1; in the fall 29.5; and in the winter 28.7.

The zymotic mortality constituted 16.55 per cent. of the total during the year; in 1894 it was 18.56 per cent, and in preceding years it has been from 17.0 to 20.60. typhoid fever caused 1,720 deaths, about 25 per 100,000 population, which has been the rate for several years past. The Hudson valley district has a higher rate of mortality from it than any other. Diphtheria caused 5,000 deaths, which is less than for several years. Its decrease occurred in all parts of the State, but chiefly in the maritime district, where there were 1,200 fewer deaths from it than in 1894. Scarlet fever caused 850 deaths, which is less than half the average yearly mortality from it for the past eight years. From measles and whooping cough the mortality was excessive, and especially in the eastern part of the State but becoming more generally distributed in the last of the year. Diarrhœal diseases caused 9,000 deaths, which is, with little variation, the yearly average in this State. There were 546 deaths reported from cerebro-spinal meningitis, and 406 from malarial diseases, the latter showing a yearly decrease in reported mortality for eight years. From grippe there were 5,100 deaths in the four first months of the year. Consumption caused the usual yearly mortality, a little over 13,000 deaths, and a little more than 10 per cent. of the total deaths.

REPORT

OF THE

TUBERCULOSIS COMMITTEE

OF THE

STATE BOARD OF HEALTH.

REPORT.

The Tuberculosis Committee has the honor to submit, pursuant to the provisions of chapter 1013, Laws of 1895, a report of the work carried on by it in the direction of promoting public health, both as regards its administrative duties and the systematic investigations with which it is intrusted, relating to the examination of cattle for tuberculosis since its appointment.

A vast amount of preliminary work was necessary to prepare for the investigations proper. Applying the knowledge previously gained to perfecting a system of procedure, charts have been prepared which will minimize the clerical duties of both inspectors and commissioners. Much time and thought were expended upon these, and it is believed that they will meet all the requirements.

Arrangements have been perfected with the Bureau of Animal Industry, Department of Agriculture, Washington, by which an ample supply of tuberculin may be had free of charge, the only consideration expected is that the Tuberculosis Committee shall furnish a copy of each and every investigation with this agent.

Three inspectors have been engaged for field work. These are Dr. M. J. Henderson, of Syracuse, Dr. John Faust, of Poughkeepsie, and Dr. Robert Austin, of Schenectady. These gentlemen have had experience in this line of work under the direction of the Tuberculosis Commission of last year, and they have proved their competency. They receive a per diem and expenses when actually employed, and full equipment for examination is furnished by the Committee.

The practical work of inspection began on the 15th of July, 1895. Dr. Henderson was ordered to Buffalo, Dr. Austin to Boonville, Dr. Faust to Verbank, Dutchess county. Requests were made to the Comptroller of the State by Mr. George D. Briggs of Buffalo, where much interest prevails on the subject, and where leading

physicians of Buffalo desired to establish an unquestioned source of milk supply for nursing infants, the principal object to be sought was that it be absolutely free from tuberculosis. Authority was asked that the health authorities of Buffalo be empowered to make the examination. The matter was referred to the Committee by the Comptroller. The herd consisted of 16 high bred Jerseys. Dr. Henderson was instructed to make the examination, and if he found any suspicion of the disease he was directed to apprise the Committee, who would attend the autopsy, for if an error were made it would be expensive for the State, as the animals were said to be valuable; and moreover the scientific eyes of Buffalo were centered thereon. Negative results were reported.

Not so with the other inspectors. Dr. Austin was ordered to examine a herd belonging to Mr. E. M. Sperry, of Boonville, complaint having been made by the health officers of the place, and at request of owner, several of the cattle having died. An autopsy showed the disease to exist. His cattle were quarantined and the sale of the dairy product interdicted. Your time will not be taken with details. Suffice it that seven animals of the common breed were condemned and slaughtered. Autopsy showed extensive disease in each case.

Dr. Faust examined a herd of 22 registered Ayreshires and Guernseys owned by Eugene Ham, of Verbank. All were found to be diseased. These cattle were also in quarantine and the sale of the dairy product was prevented. The owner requested the examination. The history of this herd shows that the disease dates back eight years, during which time the owner has lost 12 head from undoubted tuberculosis. All these cattle were in good condition so far as objective signs would indicate.

Dr. Henderson made investigations in Onondaga, Oneida and Oswego counties. Tuberculosis was alleged to exist in several localities in this region. Among these herds is one supplying St. John Military school with milk, near Manlius. Another herd at Carmel, Putnam county, was examined by Dr. Faust. Dr. Austin made examinations in the Mohawk valley district, and Dr. Faust's investigations were confined to the Hudson valley district.

The policy of the Tuberculosis Committee, in so far as it has been outlined, is to assist local health authorities to establish and maintain pure sources of milk supply, to disseminate knowledge among the dairymen and the people with regard to the behavior of tuberculosis, and to stamp out certain centres of infection, thereby lessening the liability to contagion. Tuberculosis, in some form or other, accounts for a very large percentage of the deaths in the State, and when it is known that there is at the present time a large amount of meat consumed from tuberculous cattle, and that milk from such cattle enters into the dietary of the people, and that there is danger when the bacillus is ingested, it it believed to be a most potent source of infection, especially in children.

It is only within the past three or four years that attention has been paid to the connection of cause and effect between human and bovine tuberculosis, but because in all the years prior no connection has been made out between the two, it most certainly does not follow that none existed. All the evidence gathered in recent years has indeed established a most intimate connection between the two. In making any attempt to classify diseased carcasses it is easy to say, in a given case, that the disease is localized and, therefore, can do no harm; but in studying the disease it is impossible to decide at what period it becomes general. No one can say in any case, absolutely, that the germs have not commenced to be circulated in every part of the body, therefore the Committee deems it the best policy to destroy any animals affected.

Not long since it seemed that tuberculosis in cattle could not be successfully dealt with, as the methods of diagnosis fell far short of accuracy by the means then employed, which consisted of auscultation, percussion, accompanied with observations as to general nutrition. Accumulated experience and abundant recorded observations now attest that cattle may be, and frequently are, advanced in tuberculosis while at the same time their general nutrition may be sustained. The mediastinal glands and the general lymphatic system appears to be the favorite seat of tuberculous

infection. It is only after some of the important viscera become infected that the animals lose flesh. The fact that in very many cases the lymphatics are first involved proves quite conclusively that the primary mode of infection is through the alimentary canal, the bacilli escaping into the lymphatics, the lungs not becoming involved until the mediastinal glands become affected at the base of the lungs.

The opinion prevails very generally that milk from animals whose udders are not distinctly the seat of tubercular processes will not contain tubercle bacilli. This does not accord with post-mortem lesions found. It is certain that bacilli do escape through the medium of the blood from the alimentary tract and find lodgment in the glandular system. It is easy to understand that through this same medium bacilli may find their way into the milk, although the udder may be entirely free from lesions.

The efficacy of tuberculin as a diagnostic agent is of incalculable benefit, although if followed without due caution in some cases it will lead to error. By the use of this agent some animals, advanced in the disease, fail to show any reaction, and in other cases animals not as extensively affected will show the highest reaction. In the examinations thus far made not a single error has occurred, as proven by the autopsies.

Public opinion has, until recently, been lukewarm on this subject, and even the medical profession has not devoted the attention to the subject of transmissibility of tubercle to man through meat or milk that it deserved.

The obvious results of the work done thus far lie in the evident effects on the education of the people as to the infectious nature of tuberculosis and the means to be taken for its detection and prevention. Good effects will necessarily follow any increase in general knowledge relating to the disease.

The only criticism made is that the department does not respond to all requests made for examinations. A misapprehension obtains very generally in some sections of the State with regard to the workings of this department. The opinion seems to prevail that there is an unlimited fund at the disposal of this Committee, and that it should respond to all demands.

This work is now engaging the best attention of all civilized countries. While New York was the first, through its State Board of Health, to take the initiative, it is not to-day by any means in advance. Massachusetts and other eastern States are engaged in making systematic investigations of all dairy cattle, with a view of eliminating tuberculous animals. Rigid quarantine is also provided in some of these States against the introduction of cattle within their respective boundaries, unless accompanied with certificates from an undoubted source, setting forth the fact that they are free from tuberculosis.

Tables showing tuberculin tests, appraisals and awards in cases of animals examined and destroyed are herewith annexed.

F. O. DONOHUE, M. D.,
OWEN CASSIDY.

TABLE

OF

Tuberculin Tests, Post-mortems, Appraisals and Awards.

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Broome county:				
Conklin	Levi L. Roe	7-8 Holstein		201
"	"	Native		203
"	"	Native		204
"	"	7-8 Holstein		205
"	"	Grade Jersey		206
"	"	Native		207
"	"	Holstein		209
"	"	Native		211
"	"	3-4 Holstein, 1-4 Jersey		212
"	"	Grade Jersey		214
"	"	3-4 Ayrshire		217
"	"	Native		218
"	"	G. Holstein		223
"	"	Jersey		226
"	"	Holstein		229
"	"	Native		232
"	"	7-8 Ayrshire		233
"	"	Native		234
"	"	Native		235
"	"	G. Holstein		236
"	"	G. Jersey		237
"	"	Native		238
"	"	G. Jersey		241
"	"	Native		242
"	"	G Holstein		243
"	"	Ayrshire		244
"	"	Native		248
"	"	1-2 Holstein		259
"	"	G. Holstein		260
"	"	Native		263
"	"	G. Holstein		266
"	"	G. Devon		270
"	"	G. Holstein		273
"	"	Holstein		275
"	"	G. Jersey		276
"	"	Jersey		277
"	"	Native		278
"	W. A. Vinning	Grade		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	C. E. Fuller	Grade		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Binghamton	Binghamton State Hospital	"		
"	"	"		
"	"	"		

NOTE.—The high initial temperature of the dry cows (244-270) due to being in hot sun all day

Appraisals and Awards.

Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
			a. m.	a. m.	6 p. m.	8 p. m.	
		1895.					
.....	900	Sept. 9 and 10	.....	.....	101.8	101.9	2 c c
.....	850	"	.....	.....	102.7	102.6	2 c c
.....	700	"	.....	.....	101.7	102.5	2 c c
.....	500	"	.....	.....	101.5	101.7	1½ c c
.....	600	"	.....	.....	102.4	102.4	2 c c
.....	850	"	.....	.....	103 4	103.6	2 c c
.....	900	"	.....	.....	101.5	101.7	2 c c
.....	900	"	.....	.....	100	100.6	2 c c
.....	900	"	.....	.....	101.2	102 4	2 c c
.....	750	"	.....	.....	102	101.8	2 c c
.....	750	"	.....	.....	103.3	103.1	2 c c
.....	700	"	.....	.....	101.3	101.5	2 c c
.....	900	"	.....	.....	103.2	102.5	2 c c
.....	850	"	.....	.....	101.8	102	2 c c
.....	1,000	"	.....	.....	102.8	102.5	2 c c
.....	800	"	.....	.....	102	101.6	2 c c
.....	950	"	.....	.....	102	102	2 c c
.....	700	"	.....	.....	101.5	102	2 c c
.....	900	"	.....	.....	103.5	103.6	2 c c
.....	700	"	.....	.....	101.3	101.4	2 c c
.....	750	"	.....	.....	103	102.8	2 c c
.....	850	"	.....	.....	102.2	102	2 c c
.....	750	"	.....	.....	102.3	102.5	2 c c
.....	1,000	"	.....	.....	101.6	101.3	2 c c
.....	550	"	.....	.....	101.6	102	1½ c c
.....	900	"	.....	.....	103.8	103	2 c c
.....	600	"	.....	.....	102.5	102 4	2 c c
.....	1,000	"	.....	.....	103.2	103	2 c c
.....	800	"	.....	.....	104	103	2 c c
.....	900	"	.....	.....	103.5	103.2	2 c c
.....	950	"	.....	.....	103.2	102.4	2 c c
.....	850	"	.....	.....	104.4	1·4	2 c c
.....	750	"	.....	.....	103.4	102.3	2 c c
s.....	1,400	"	.....	.....	103	101.5	3 c c
.....	700	"	.....	.....	101.8	101 4	2 c c
.....	700	"	.....	.....	102.2	101.5	2 c c
.....	650	"	.....	.....	102.2	102	2 c c
						7 p. m.	
.....	800	Oct. 9 and 10.	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	103	2 c c
.....	800	"	.....	.....	.....	101	2 c c
.....	850	"	.....	.....	.....	102.6	2 c c
.....	800	"	.....	.....	.....	103.8	2 c c
.....	750	"	.....	.....	.....	102.6	2 c c
.....	800	"	.....	.....	.....	102	2 c c
						8 p. m.	
.....	750	"	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	101.2	2 c c
.....	800	"	.....	.....	.....	103	2 c c
.....	800	"	.....	.....	.....	103	2 c c
.....	800	"	.....	.....	.....	101.6	2 c c
.....	850	"	.....	.....	.....	101.4	2 c c
.....	700	"	.....	.....	.....	104	2 c c
.....	750	"	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	103.6	2 c c
.....	800	"	.....	.....	.....	101.8	2 c c
.....	800	"	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	102.2	2 c c
.....	850	"	.....	.....	.....	102	2 c c
.....	800	"	.....	.....	.....	103	2 c c
.....	750	"	.....	.....	.....	103	2 c c
						7.30 p m.	
.....	1,200	Oct. 19 and 20	.....	.....	.....	102	2 c c
.....	1,500	"	.....	.....	.....	101.8	2 c c
.....	1,200	"	.....	.....	.....	102	2 c c
.....	1,200	"	.....	.....	.....	102	2 c c

close them in evening to get them to stable, not being accustomed to come in now.

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Broome county:				
Binghamton	Binghamton State Hospital	Grade		1602
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1603
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	Jersey		1604
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1606
"	"	"		
"	"	"		1605
"	"	Grade		1607
"	"	"		1608
"	"	"		1609
"	"	"		1610
"	"	"		1611
"	"	"		
"	"	"		1612
"	"	"		
"	"	"		1613
"	"	"		
"	"	"		1614
"	"	"		1615
"	"	"		
"	"	"		1616
"	"	"		1617
"	"	"		1618
"	"	"		
"	"	"		
"	"	"		1619
"	"	"		
"	"	"		1620
"	"	"		1627
"	"	"		1621
"	"	"		
"	"	"		
"	"	"		1622
"	"	"		1623
"	"	"		1624

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	6 p. m.	7.30 p m	
F	7 years	1,200	Oct. 19 and 20				101	2 c c
F	5 years	1,200	"				101	2 c c
F	7 years	1,200	"				102	2 c c
F	6 years	1,200	"				102	2 c c
F	8 years	1,200	"				103	2 c c
F	7 years	1,100	"				101	2 c c
F	6 years	1,100	"				101.8	2 c c
F	7 years	1,100	"				104.6	2 c c
F	6 years	1,100	"				101	2 c c
F	8 years	1,100	"				101	2 c c
F	7 years	1,100	"				101	2 c c
F	5 years	1,100	"				101.8	2 c c
F	5 years	1,100	"				100.8	2 c c
F	7 years	1,100	"				103.6	2 c c
F	6 years	1,000	"				101	2 c c
F	8 years	1,000	"				101.8	2 c c
F	5 years	1,000	"				101	2 c c
F	7 years	1,000	"				101	2 c c
F	8 years	1,000	"				101.8	2 c c
F	9 years	1,000	"				101	2 c c
F	6 years	1,000	"				104	2 c c
F	8 years	1,000	"				102	2 c c
F	7 years	1,000	"				102	2 c c
F	8 years	1,000	"				102	2 c c
F	5 years	1,000	"				101.8	2 c c
F	4 years	1,000	"				101	2 c c
F	5 years	1,000	"				102.8	2 c c
F	6 years	1,000	"				101	2 c c
F	7 years	1,000	"				102	2 c c
F	12 years	1,000	"				101	2 c c
F	3 years	1,000	"				101.4	2 c c
F	4 years	1,000	"				101	2 c c
F	4 years	1,000	"				101	2 c c
F	4 years	1,000	"				102	2 c c
F	4 years	1,000	"				101	2 c c
F	4 years	1,000	"				101.4	2 c c
F	4 years	1,000	"				101	2 c c
M	2 years	2,200	"				102	2 c c
M	1 year	800	"				101	2 c c
F	15 years	900	"				100	2 c c
							6 p. m.	
F	5 years	1,000	Oct. 20 and 21				102.8	2 c c
F	6 years	1,000	"				103	2 c c
F	5 years	1,000	"				101	2 c c
F	4 years	1,000	"				101	2 c c
F	5 years	1,000	"				102	2 c c
F	6 years	1,000	"				101.4	2 c c
F	7 years	1,000	"				101.4	2 c c
F	5 years	1,000	"				103.6	2 c c
F	5 years	1,000	Oct. 19 and 20				102	2 c c
F	6 years	1,000	"				103	2 c c
F	5 years	1,000	"				101	2 c c
F	4 years	1,000	"				104	2 c c
F	2 years	900	"				102	2 c c
F	2 years	900	"				102	2 c c
F	2 years	900	"				102	2 c c
F	2 years	900	"				102	2 c c
F	2 years	900	"				102	2 c c
F	2 years	900	"				102.6	2 c c
F	2 years	900	"				102.8	2 c c
F	2 years	900	"				101.8	2 c c
F	2 years	900	"				101.8	2 c c
F	2 years	900	"				101	2 c c
F	2 years	900	"				103	2 c c
F	2 years	900	"				101.8	2 c c
F	3 years	900	"				102	2 c c
F	4 years	900	"				102.4	2 c c
F	4 years	900	"				102	2 c c
F	4 years	900	"				102	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNERS.	Breed.	Registered No.	Tag No.
Broome county:				
Binghamton	Binghamton State Hospital	Grade		
"	"	"		1625
"	"	"		
"	"	"		
"	"	"		1626
"	"	"		1628
"	"	"		
"	"	"		1627
"	"	"		
"	"	"		1628
"	"	"		1629
"	"	"		1630
"	"	"		1631
"	"	"		
"	"	"		1632
"	"	"		
"	"	"		
"	"	"		
"	"	"		1633
"	"	"		1634
"	"	"		1635
"	"	"		1636
"	A. D. Wales	"		
"	"	"		
"	"	"		1603
"	"	"		
"	"	"		
"	"	"		
"	"	"		1612
"	"	"		1623
"	"	"		
"	"	"		1604
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Deposit	Alvin Devereux	Grade Jersey		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1609
"	"	"		
"	"	"		
"	"	"		1780
"	"	"		1627
"	"	"		
"	"	"		
"	"	"		1653
"	"	"		1604
"	"	"		
"	"	"		1670
"	"	"		1668
"	"	"		1615
"	"	"		1673
"	"	"		
"	"	"		1667
"	"	"		1635
"	"	Jersey		1614
"	"	Grade Jersey		
"	"	"		
"	"	Jersey		1632
"	"	Grade Jersey		1669

:tems, Appraisals and Awards—(*Continued*).

Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
			a. m.	a. m.	6 p. m.	6 p. m.	
3 years	1,000	Oct. 19 and 20				101.4	2 c c
4 years	1,000	"				102	2 c c
3 years	900	"				102.8	2 c c
4 years	900	"				102.6	2 c c
3 years	1,000	"				101.8	2 c c
4 years	1,000	"				102.4	2 c c
5 years	900	"				102	2 c c
5 years	900	"				102	2 c c
5 years	900	"				101	2 c c
4 years	900	Oct. 20 and 21				101.8	2 c c
6 years	900	"				102	2 c c
4 years	900	"				103	2 c c
5 years	900	"				101	2 c c
6 years	1,000	"				102	2 c c
5 years	1,000	"				102	2 c c
3 years	1,000	"				101	2 c c
2 years	1,200	"				102.6	2 c c
7 years	900	"				102	2 c c
5 years	900	"				101.6	2 c c
10 years	900	"				101	2 c c
6 years	900	"				101	2 c c
1 year	700	"				102.6	15 m
						8 p. m.	
6 years	900	Nov. 9 and 10				101.6	2 c c
8 years	900	"				101.6	2 c c
6 years	850	"				102	2 c c
7 years	900	"				102	2 c c
8 years	800	"				102	2 c c
6 years	800	"				102	2 c c
4 years	800	"				101.8	2 c c
8 years	900	"				103	2 c c
3 years	800	"				102	2 c c
10 years	800	"				101 8	2 c c
10 years	900	"				102	2 c c
5 years	800	"				101.6	2 c c
10 years	800	"				101.8	2 c c
6 years	900	"				101.8	2 c c
2 years	1,000	"				102	2 c c
7 years	900	"				103	2 c c
8 years	790	"				102	2 c c
8 years	800	"				101	2 c c
						5 p. m.	
4 years	600	Dec. 23 and 24				100.6	2 c c
4 years	600	"				102	2 c c
4 years	600	"				101	2 c c
4 years	600	"				102.6	2 c c
4 years	600	"				102	2 c c
4 years	600	"				102.4	2 c c
4 years	600	"				102	2 c c
4 years	600	"				102	2 c c
4 years	600	"				101	2 c c
4 years	600	"				101	2 c c
3 years	600	"				102	2 c c
4 years	600	"				102	2 c c
5 years	500	"				101.4	2 c c
3 years	500	"				101.6	2 c c
6 years	600	"				101.4	2 c c
4 years	500	"				101.2	2 c c
3 years	500	"				101.6	2 c c
4 years	600	"				102.2	2 c c
6 years	500	"				102	2 c c
4 years	600	"				101	2 c c
3 years	500	"				102	2 c c
4 years	600	"				102	2 c c
5 years	600	"				102 4	2 c c
4 years	600	"				101.8	2 c c
3 years	600	"				102	2 c c
3 years	600	"				103	2 c c
4 years	600	"				101	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Broome county:				
Deposit	Alvin Devereux	Grade Jersey		1634
"	"	"		1612
"	"	"		1622
"	"	"		1639
"	"	"		1622
"	"	"		1674
"	"	"		1665
"	"	"		1664
"	"	"		
"	"	"		1652
"	"	Jersey		1659
"	"	Grade Jersey		1669
"	"	"		1673
"	"	"		
"	"	"		1666
"	"	"		1654
"	"	"		1657
"	"	Jersey		1679
"	"	Grade Jersey		1621
"	"	"		1654
"	"	"		1635
"	"	"		1667
"	"	"		1605
"	"	Jersey		1668
"	"	Grade Jersey		1602
"	"	Jersey		1630
"	"	Grade Jersey		1613
"	"	"		
"	"	"		1657
"	"	"		1634
"	"	"		1671
"	"	"		
"	"	"		
"	"	"		
"	"	"		1651
"	"	"		1620
"	"	"		1615
"	"	"		1676
"	"	"		1626
"	"	"		
"	"	"		
"	"	"		1633
"	"	"		1666
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1639
"	"	"		1640
"	"	"		1638
"	"	"		1661
"	"	"		1669
"	"	"		1610
Cattaraugus county:				
Olean	Geo. B. Forman	Jersey	80289	1653
"	"	"	80290	1654
"	"	"	80213	1655

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection				Amount injected.
				a. m.	a. m.	6 p. m.	5 p. m.	
F	4 years	600	Dec. 23 and 24				101.8	2 c c
F	5 years	600	" "				102.6	2 c c
F	5 years	600	" "				102	2 c c
F	4 years	600	" "				102	2 c c
F	4 years	600	" "				101.8	2 c c
F	4 years	600	" "				102.4	2 c c
F	5 years	600	" "				102	2 c c
F	4 years	600	" "				101	2 c c
F	3 years	600	" "				101 6	2 c c
F	3 years	600	" "				102.4	2 c c
F	5 years	600	" "				101	2 c c
F	4 years	600	" "				101 8	2 c c
F	5 years	600	" "				101 6	2 c c
F	3 years	600	" "				101.4	2 c c
F	4 years	600	" "				102	2 c c
F	5 years	600	" "				101.6	2 c c
F	6 years	600	" "				101.2	2 c c
F	6 years	600	" "				100	2 c c
F	4 years	600	" "				101.6	2 c c
F	5 years	600	" "				102	2 c c
F	4 years	600	" "				100	2 c c
F	4 years	600	" "				101.6	2 c c
F	4 years	600	" "				102	2 c c
F	6 years	600	" "				101	2 c c
F	4 years	600	" "				101.2	2 c c
F	4 years	600	" "				102	2 c c
F	3 years	600	" "				100	2 c c
F	4 years	600	" "				101	2 c c
F	5 years	600	" "				101	2 c c
F	4 years	600	" "				100 4	2 c c
F	5 years	600	" "				101.2	2 c c
F	6 years	600	" "				102	2 c c
F	4 years	600	" "				101	2 c c
F	3 years	600	" "				101	2 c c
F	4 years	600	" "				102	2 c c
F	5 years	600	" "				101.8	2 c c
F	4 years	600	" "				102.6	2 c c
F	3 years	600	" "				101	2 c c
F	4 years	600	" "				102.8	2 c c
F	5 years	600	" "				101.4	2 c c
F	2 years	600	" "				101	2 c c
F	4 years	600	" "				102	2 c c
M	3 years	800	" "				104	2 c c
							8 p. m.	
F	3 years	500	Dec. 26 and 27				102	2 c c
F	3 years	500	" "				102	2 c c
F	3 years	500	" "				102	2 c c
F	3 years	600	" "				103	2 c c
F	3 years	600	" "				101	2 c c
F	3 years	600	" "				102	2 c c
F	3 years	600	" "				102.4	2 c c
F	3 years	600	" "				102 6	2 c c
F	3 years	900	" "				102	2 c c
M	3 years	400	" "				103	2 c c
F	3 years	500	" "				101.8	2 c c
F	3 years	600	" "				102	2 c c
F	4 years	500	" "				102	2 c c
F	4 years	500	" "				101.8	2 c c
F	3 years	500	" "				100.4	2 c c
F	6 years	600	" "				105	2 c c
F	4 years	800	" "				101 8	2 c c
F	4 years	600	" "				101.8	2 c c
F	7 years	800	" "				101.8	2 c c
							9 p. m.	
F	4 years	700	Nov. 2 and 3				101	2 c c
F	5 years	700	" "				101	2 c c
F	5 years	700	" "				101	2 c c
F	6 years	800	" "				101	2 c c

Table of Tuberculin Tests, P

Location.	OWNER.	Breed	Registered No.
Cattaraugus county:			
Olean	Geo. B. Forman	Jersey	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Chemung county:			
Veteran	Harvey Turner	Native	
"	"	"	
"	"	Guernsey	
"	"	"	
"	"	Native	
"	"	"	
"	"	"	
Chenango county:			
Coventryville	T. A. Southworth	Holstein	
"	"	"	
"	"	Native	
"	"	Holstein	
"	"	Native	
"	"	Holstein	
"	"	"	
"	"	"	
"	"	Native	
"	"	"	
"	"	"	
"	"	Holstein	
"	"	"	
"	"	"	
"	"	"	
Oxford	Curtis S. Mouray	"	
"	"	"	
"	"	Native	
"	"	"	
"	"	"	
"	"	"	
"	"	Holstein	
"	"	"	
"	"	Jersey	
"	"	"	
"	"	Holstein	
"	"	Native	
"	"	"	
"	"	"	
"	"	"	
"	"	Holstein	
"	"	"	
"	"	"	
"	"	Native	
"	"	Holstein	
"	"	"	
"	"	"	
Cortland county:			
McGrawville	Milford C. Bean	Grade	
Town of Virgil	John Jewell	"	
"	"	"	
"	"	"	
"	"	"	

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	6 p. m.	9 p. m.	
F	5 years	800	Nov. 2 and 3				101	2 c c
F	7 years	800	"				102	2 c c
F	6 years	750	"				101.6	2 c c
F	7 years	700	"				101	2 c c
F	8 years	800	"				101	2 c c
F	7 years	700	"				102	2 c c
F	6 years	800	"				101.4	2 c c
F	7 years	700	"				102	2 c c
F	6 years	750	"				101.4	2 c c
F	5 years	700	"				101	2 c c
F	4 years	700	"				101	2 c c
F	3 years	750	"				101	2 c c
F	5 years	700	"				101	2 c c
F	4 years	750	"				99	2 c c
							8 p. m.	
F	6 years	1,000	Dec. 11 and 12				102	2 c c
F	5 years	1,000	"				102	2 c c
F	6 years	1,000	"				101	2 c c
F	4 years	900	"				100	2 c c
F	7 years	1,000	"				102	2 c c
F	6 years	1,000	"				102	2 c c
F	5 years	1,000	"				101	2 c c
							10 p. m.	
F	2 years	600	Dec. 9 and 10				100	2 c c
F	2 years	600	"				102¼	2 c c
F	3 years	750	"				100	2 c c
F	3 years	900	"				101¾	2 c c
F	8 years	800	"				100½	2 c c
F	5 years	900	"				101	2 c c
F	6 years	800	"				101	2 c c
F	7 years	800	"				100½	2 c c
F	7 years	900	"				101¾	2 c c
F	6 years	900	"				101¼	2 c c
F	6 years	800	"				101½	2 c c
F	1 year	800	"				102½	2 c c
F	6 months	400	"				102	2 c c
M	8 months	500	"				102¼	2 c c
F	4 years	700	Dec. 17 and 18				100	2 c c
F	5 years	800	"				101	2 c c
F	4 years	700	"				100	2 c c
F	3 years	700	"				100½	2 c c
F	3 years	700	"				100	2 c c
F	4 years	800	"				100	2 c c
F	5 years	750	"				101	2 c c
F	8 years	800	"				100	2 c c
F	7 years	700	"				101	2 c c
F	6 years	700	"				100	2 c c
F	4 years	850	"				101½	2 c c
F	5 years	850	"				100	2 c c
F	4 years	700	"				102½	2 c c
F	4 years	750	"				101	2 c c
F	6 years	750	"				103	2 c c
F	6 years	700	"				102½	2 c c
F	6 months	400	"				102	1 c c
F	6 months	500	"				102¾	1 c c
F	6 months	400	"				102	1 c c
M	6 months	450	"				102¾	1 c c
M	6 months	400	"				101	1 c c
M	6 months	350	"				102	1 c c
M	6 months	400	"				102	1 c c
				10 a. m.	12 m.	6 p. m.	8 p. m.	
M	12 months	1,100	July 28 and 29	101	101.6	101	102	2 c c
F	4 years	900	July 31				101	2 c c
F	4 years	950	August 1				101.4	2 c c
F	8 years	1,000	"				101	2 c c
F	4 years	1,000	"				101 8	2 c c
F	4 years	800	"				101.6	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Cortland county:				
Town of Virgil	John Jewell	Grade		
"	"	"		
"	"	"		
"	"	"		
Delaware county:				
Franklin	Edwin Taylor, P. O. address 134 State street, Binghamton, N. Y.	Grade Jersey		201
"	"	Native		203
"	"	"		204
"	"	"		205
"	"	Grade Holstein		
"	"	Native		206
"	"	Holstein		207
"	"	Native		209
"	"	Grade Jersey		211
"	"	Native		212
"	"	"		214
"	"	Grade Jersey		
"	"	Native		217
"	"	Grade Jersey		218
"	"	Native		223
"	"	"		228
"	"	Grade Jersey		229
"	"	Native		232
"	"	Grade Jersey		233
"	"	Native		234
"	"	"		235
"	"	"		236
"	"	"		
"	"	"		237
"	"	"		238
"	"	Grade Jersey		
"	"	Native		
"	"	"		
"	"	"		
"	"	"		241
"	"	"		242
"	"	Jersey		
"	"	Native		
"	"	Grade Jersey		
"	"	"		243
"	"	"		
"	"	"		
"	"	"		
"	George Forsyth	Native		
"	"	"		
"	"	Grade Ayrshire		
"	"	Grade Jersey		
"	"	"		
"	"	"		
"	"	Native		
"	"	"		
"	"	Grade Ayrshire		
"	"	Native		
"	"	Grade Jersey		
"	"	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Dutchess county:				
Crum Elbow	George H. Briggs	Jersey		706
"	"	"		706
"	"	"		707

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	6 p. m.	8 p. m.	
F	4 years	900	August 1				101 8	2 c c
F	12 years	1,000	"				101.6	2 c c
F	1 year	700	"				101	20 m
F	1 year	400	"				102	20 m
						5 p. m.	8 p. m.	
F	5 years	550	Nov. 5 and 6			101 8	101.4	2 c c
F	7 years	750	"			101.6	101.8	2 c c
F	9 years	750	"			101.8	102.2	2 c c
F	8 years	700	"			101.9	101.9	2 c c
F	2½ years	700	"			101	101.2	2 c c
F	5 years	750	"			102.4	103.2	2 c c
F	8 years	800	"			101.7	101.8	2 c c
F	8 years	850	"			101.8	102	2 c c
F	10 years	700	"			102.1	101.9	2 c c
F	Aged	850	"			102.1	101.8	2 c c
F	Aged	850	"			101.8	101.4	2 c c
F	2½ years	500	"			101.6	102 6	1½ c c
F	6 years	650	"			102	102	2 c c
F	Aged	700	"			101.8	101.8	2 c c
F	Aged	650	"			101 8	101.2	2 c c
F	Aged	700	"			102	102	2 c c
F	4 years	700	"			102	102.2	2 c c
F	6 years	750	"			101.9	102.5	2 c c
F	5 years	750	"			101	101.4	2 c c
F	7 years	700	"			103	103.2	2 c c
F	8 years	750	"			101.2	101.5	2 c c
F	8 years	750	"			101.1	100.8	2 c c
F	6 years	800	"			101	101.3	2 c c
F	8 years	800	"			102	101 8	2 c c
F	8 years	750	"			101	100.7	2 c c
F	6 years	700	"			101.5	101.2	2 c c
F	10 years	800	"			101.8	101 4	2 c c
F	9 years	800	"			102.5	102.4	2 c c
F	5 years	750	"			100.7	100.5	2 c c
F	7 years	800	"			102.2	101.3	2 c c
F	8 years	800	"			101.6	101.3	2 c c
M	1½ years	600	"			103.2	102.8	1½ c c
F	3 years	600	"			101.2	101.2	2 c c
F	6 years	800	"			102 1	102	2 c c
F	4 years	700	"			102.6	103	2 c c
							6 p. m.	
F	1½ years	500	Nov. 6 and 7				102	1 c c
F	1½ years	450	"				101.8	1 c c
F	1½ years	500	"				103.2	1 c c
						2.30 p m	5.30 p m	
F	6 years	700	Nov. 8 and 9			101.6	101.2	2 c c
F	7 years	800	"			101.8	101.8	2 c c
F	4 years	700	"			101.6	101.4	2 c c
F	6 years	600	"			101.2	101.4	2 c c
F	Aged	800	"			101 4	101 2	2 c c
F	Aged	750	"			102	101.7	2 c c
F	6 years	850	"			101	101	2 c c
F	5 years	650	"			101.5	101.4	2 c c
F	5 years	650	"			101	101	2 c c
F	5 years	700	"			101 5	101.3	2 c c
F	3 years	600	"			101	100.8	2 c c
F	Aged	750	"			101.9	101.9	2 c c
F	7 years	850	"			101.1	101	2 c c
F	9 years	750	"			100.7	101.8	2 c c
F	6 years	700	"			101.2	101.3	2 c c
F	10 years	750	"			102	101.8	2 c c
F	7 years	600	"			100.5	100.6	2 c c
							6 p. m.	
F	5 years	800	July 22 and 23				103	2 c c
F	5 years	850	"				102½	2 c c
F	7 years	900	"				102	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed	Registered No.	Tag No.
Dutchess county:				
Crum Elbow	George H. Briggs	Jersey		
"	"	"		
"	"	"		
"	"	"		798
"	"	"		799
"	"	"		
Wurtenburgh	Alvah Burger	"		
"	"	"		
"	"	"		800
Fishkill	James Daverson	Native		
"	"	"		
"	"	"		1973
"	"	"		
"	"	"		
"	"	"		1974
"	"	"		
"	"	"		1975
Red Hook	David H. Vosburgh	Grade Jersey		1802
"	"	"		1803
"	"	Grade Guernsey		1806
				1807
Poughkeepsie	Israel Weisberger	Native		1808
East Park	J. S. Haver	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1961
Clinton Corners	J. B. Wood	"		
"	"	Jersey		1968
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Pleasant Valley	John Murtaugh	"		1760
"	"	"		
"	"	"		1762
Poughkeepsie	John Lenehan	Grade		1815
Clinton Hollow	Oliver D. Husted	Native		1868
"	"	"		
"	"	"		1869
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		

rtems, Appraisals and Awards—(*Continued*).

Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
			a. m.	a. m.	2.30 p m	6 p. m.	
10 years	800	July 22 and 23	.....	.....	.....	103½	2 c c
3 years	850	" "	.....	.....	.....	102½	2 c c
8 years	850	" "	.....	.....	.....	103	2 c c
6 years	900	" "	.....	.....	.....	102	2 c c
6 years	900	" "	.....	.....	.....	101½	2 c c
6 years	1,201	" "	.....	.....	.....	102½	3 c c
6 years	1,200	" "	.....	.....	.....	103	3 c c
3 years	900	July 24 and 25	.....	.....	.....	.....	2 c c
4 years	950	" "	.....	.....	.....	.....	2 c c
1 year	400	" "	.....	.....	.....	.....	2 c c
6 years	900	" "	.....	.....	.....	.....	2 c c
4 years	900	Aug. 20 and 21	.....	.....	.....	102½	2 c c
4 years	850	" "	.....	.....	.....	104	2 c c
7 years	1,000	" "	.....	.....	.....	103½	2 c c
6 years	1,050	" "	.....	.....	.....	102	2 c c
6 years	1,000	" "	.....	.....	.....	103	2 c c
8 years	875	" "	.....	.....	.....	102½	2 c c
4 years	800	" "	.....	.....	.....	102½	2 c c
5 years	1,050	" "	.....	.....	.....	102½	2 c c
6 years	900	" "	.....	.....	.....	102¾	2 c c
3 years	950	" "	.....	.....	.....	102	2 c c
3 years	850	" "	.....	.....	.....	102¾	2 c c
5 years	950	Sept. 26 and 27	.....	.....	.....	102½	2 c c
4 years	950	" "	.....	.....	.....	101½	2 c c
4 years	90	" "	.....	.....	.....	103	2 c c
4 years	900	" "	.....	.....	.....	101½	2 c c
						8 p. m.	
6 years	1,000	Oct. 2 and 3	.....	.....	.....	102¾	2 c c
						6 p m	
4 years	950	Oct. 4 and 5	.....	.....	.....	102	2 c c
3 years	850	" "	.....	.....	.....	102	2 c c
3 years	800	" "	.....	.....	.....	102¼	2 c c
2 years	500	" "	.....	.....	.....	102¾	1 c c
2 years	550	" "	.....	.....	.....	102	1 c c
2 years	600	" "	.....	.....	.....	102	1 c c
3 years	700	" "	.....	.....	.....	102½	2 c c
1 year	450	" "	.....	.....	.....	102	1 c c
2 years	600	" "	.....	.....	.....	101¾	1 c c
1 year	550	" "	.....	.....	.....	102	1 c c
4 years	800	" "	.....	.....	.....	103¼	2 c c
6 years	1,100	" "	.....	.....	.....	101¾	2 c c
10 years	1,200	Oct. 11 and 12.	.....	.....	.....	101	2 c c
6 years	950	" "	.....	.....	.....	101½	2 c c
2 years	700	" "	.....	.....	.....	102½	2 c c
4 years	950	" "	.....	.....	.....	102¾	2 c c
4 years	850	" "	.....	.....	.....	101½	2 c c
6 years	900	" "	.....	.....	.....	101	2 c c
2 years	700	" "	.....	.....	.....	101½	2 c c
12 years	1,000	" "	.....	.....	.....	101	2 c c
5 years	900	" "	.....	.....	.....	101½	2 c c
5 years	950	" "	.....	.....	.....	101½	2 c c
10 years	1,100	" "	.....	.....	.....	101	2 c c
3 years	800	" "	.....	.....	.....	101¼	2 c c
1 year	400	" "	.....	.....	.....	101½	1 c c
4 years	800	Oct. 17 and 18.	.....	.....	.....	101½	2 c c
5 years	800	" "	.....	.....	.....	102	2 c c
7 years	1,000	" "	.....	.....	.....	101¾	2 c c
1 year	400	" "	.....	.....	.....	103	1 c c
4 years	1,000	Dec. 2 and 3.	.....	.....	.....	101	2 c c
						9 p. m.	
8 years	900	Dec. 4 and 5.	.....	.....	.....	100	2 c c
5 years	1,000	" "	.....	.....	.....	101¾	2 c c
8 years	950	" "	.....	.....	.....	101½	2 c c
5 years	900	" "	.....	.....	.....	101	2 c c
8 years	1,100	" "	.....	.....	.....	100	2 c c
2 years	800	" "	.....	.....	.....	101¾	2 c c
7 years	800	" "	.....	.....	.....	99½	2 c c
1 year	400	" "	.....	.....	.....	101	1 c c
1 year	450	" "	.....	.....	.....	101½	1 c c
1 year	350	" "	.....	.....	.....	101¾	1 c c

Table of Tuberculin Tests,

Location	OWNER.	Breed	Registered No.
Dutchess county:			
Clinton Hollow	Oliver D. Husted	Native	
Noxon	James L. Croft	Grade	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Pleasant Valley	John S. Schouten	"	
"	"	"	
"	"	"	
Verbank	Eugene Hans	Ayrshire	1103
"	"	"	1003
"	"	"	1280
"	"	"	1281
"	"	"	1004
"	"	"	926
"	"	"	110
"	"	"	1004
"	"	"	1290
"	"	"	607
"	"	"	569
"	"	"	1281
"	"	"	1281
"	"	"	1281
"	"	Guernsey	810
"	"	"	360
"	"	"	312
"	"	"	312
"	"	"	810
"	"	"	428
"	"	"	473
"	"	"	810
Erie County:			
Buffalo	G. D. Briggs	Jersey	9965
"	"	"	7206
"	"	"	
"	"	"	4635
"	"	"	
"	"	"	1569
"	"	"	9252
"	"	"	7562
"	"	"	7903
"	"	"	5809
"	"	"	9232
"	"	"	3875
"	"	"	
"	"	Grade	
"	"	"	
Franklin County:			
Malone	James S. Amsden	Native	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	

ortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	2.30 p m	9 p. m.	
F	1 year	500	Dec. 4 and 5				102	1 c c
							7 p. m	
F	10 years	1,000	Dec. 17 and 18				102⅛	2 c c
F	4 years	700	"				101½	2 c c
F	10 years	900	"				102⅛	2 c c
F	10 years	800	"				102	2 c c
F	2 years	500	"				102¾	2 c c
F	6 years	950	"				102	2 c c
F	4 years	900	"				102⅛	2 c c
F	7 years	1,000	"				101⅛	2 c c
F	4 years	900	Dec. 13 and 14				101⅛	2 c c
F	9 years	1,000	"				100⅛	2 c c
F	6 years	900	"				100⅛	2 c c
							6 p. m.	
F	5 years	1,100	July 15 and 16				102	2 c c
F	8 years	1,100	"				102⅛	2 c c
F	4 years	1,000	"				101⅛	2 c c
F	3 years	1,000	"				101¾	2 c c
F	7 years	1,050	"				101¾	2 c c
F	10 years	950	"				102	2 c c
F	6 years	1,100	"				102	2 c c
F	7 years	950	"				101¾	2 c c
F	4 years	1,100	"				102	2 c c
F	16 years	950	"				101⅛	2 c c
M	2 years	900	"				101⅛	2 c c
F	2 years	800	"				101½	2 c c
F	2 years	800	"				101⅛	2 c c
F	2 years	800	"				102	2 c c
F	3 years	1,100	"				101	2 c c
F	8 years	1,100	"				101½	2 c c
F	9 years	1,000	"				101⅛	2 c c
F	9 years	1,100	"				102	2 c c
F	4 years	1,050	"				100¾	2 c c
F	7 years	1,100	"				102	2 c c
F	6 years	1,070	"				102	2 c c
F	4 years	1,100	"				102	2 c c
					5 p. m.	7 p. m.	10 p. m.	
F	9 years	1,100	"		102	101.4	101	2 c c
F	6 years	1,000	"		103.4	103	102.6	2 c c
F	9 years	900	"		102	102	101	2 c c
F	8 years	900	"		101.2	101	101	2 c c
F	6 years	900	"		102	101	101	2 c c
F	14 years	1,000	"		102	102	102	2 c c
F	3 years	800	"		103	102	102.6	2 c c
F	5 years	800	"		102	102	102	2 c c
F	4 years	900	"		101.6	101.6	101	2 c c
F	10 years	950	"		102.2	101.2	101.4	2 c c
F	7 years	900	"		102	102	102.6	2 c c
F	2 years	640	"		102	101.6	101.6	2 c c
M	1 year	500	"		102	101.8	102	1½ c c
F	2 years	650	"		102	101.8	101 8	2 c c
F	2 years	650	"		102.4	102.2	102	2 c c
						11 a. m.	4 p. m.	
F	5 years	800	Dec. 18 and 19			103.6	102.1	2 c c
F	6 years	800	"			103	101.6	2 c c
F	9 years	800	"			102.6	101.8	2 c c
F	8 years	850	"			103.5	102	2 c c
F	9 years	800	"			103.1	101	2 c c
F	8 years	900	"			102.2	101	2 c c
F	11 years	800	"			102.7	101	2 c c
F	9 years	800	"			103.2	101	2 c c
F	7 years	800	"			103	101.8	2 c c
F	8 years	900	"			103.1	102.2	2 c c
F	7 years	900	"			103.8	102	2 c c
F	4 years	800	"			103	101 5	2 c c
F	Aged	800	"			102.7	101.6	2 c c
F	9 years	900	"			103.4	101.6	2 c c
F	Aged	750	"		103.2	101.4		2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Franklin county:				
Malone	James S. Amsden	Native		246
"	"	"		248
"	"	"		250
"	"	"		252
"	"	"		253
"	"	"		255
"	"	"		256
"	"	"		257
"	"	"		258
"	"	"		259
"	"	"		260
"	"	"		261
"	"	"		262
"	"	"		263
"	"	"		264
"	"	"		266
"	"	"		267
"	"	"		268
"	"	"		269
"	"	"		270
"	"	"		273
"	"	"		274
"	"	"		275
"	"	Grade Holstein		276
"	"	Native		277
"	"	"		278
"	"	"		279
"	"	"		280
"	"	Grade Holstein		.....
"	"	Native		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		281
"	"	"		.....
"	"	"		.....
"	"	"		.....
"	"	"		283
"	"	"		.....
"	"	"		.....
"	"	"		.....
Greene county:				
Ashland	Russell G. Sutton	Common		.....
"	"	Jersey		.....
"	"	Devon		1703
"	"	Jersey		.....
"	"	"		.....
"	"	Common		.....
"	"	Jersey		1734
"	"	"		1743
"	"	Common		.....
"	"	"		.....
"	"	Jersey		.....
"	"	"		.....
"	"	"		.....
"	"	Common		.....
"	"	Jersey		.....
"	"	"		.....

›rtems, Appraisals and Awards—(*Continued*).

	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	5 p. m.	11 a. m.	4 p. m.	
F	8 years	900	Dec. 18 and 19	.....	102.8	101.1	.....	2 c c
F	11 years	900	"	.....	103.2	101	.....	2 c c
F	12 years	800	"	.....	102.3	101.6	.....	2 c c
F	8 years	900	"	.....	103.4	102	.....	2 c c
F	9 years	850	"	.....	103.2	102	.....	2 c c
F	5 years	850	"	.....	103.4	101.8	.....	2 c c
F	Aged	900	"	.....	103.2	101.2	.....	2 c c
F	8 years	850	"	.....	102.8	102	.....	2 c c
F	8 years	900	"	.....	103	101.9	.....	2 c c
F	8 years	800	"	.....	103.8	101.8	.....	2 c c
F	3 years	550	"	.....	103.2	101	.....	1¾ c c
F	4 years	600	"	.....	103.1	102.2	.....	2 c c
F	6 years	1,000	"	.....	102.7	101.8	.....	2 c c
F	7 years	1,000	"	.....	102.3	102	.....	2 c c
F	10 years	1,000	"	.....	102.7	101.9	.....	2 c c
F	7 years	900	"	.....	102.6	102	.....	2 c c
F	3 years	800	"	.....	102.8	102.2	.....	2 c c
F	9 years	900	"	.....	102.8	106.6	.....	2 c c
F	10 years	900	"	..	103.2	102	.....	2 c c
F	4 years	600	"	.....	103.8	102.2	.....	1¾ c c
					10 a. m.	3 p. m.		
F	11 years	800	Dec. 19 and 20	.....	103	101.6	.....	2 c c
F	10 years	900	"	.....	102	102	.....	2 c c
F	9 years	900	"	.....	105	104.8	.....	2 c c
F	Aged	800	"	.....	102.8	101 8	.....	2 c c
F	11 years	1,000	"	.....	102	101.7	.....	2 c c
F	10 years	1,000	"	.....	103	102.3	.....	2 c c
F	5 years	800	"	.....	104	103	.....	2 c c
F	Aged	800	"	.....	103 8	102.8	.....	2 c c
F	Aged	1,000	"	.....	102 3	101 8	.....	2 c c
F	8 years	900	"	.....	102 6	101.8	.....	2 c c
F	2½ years	1,000	"	.....	102.5	101 5	.....	2 c c
F	9 months	300	"	.....	103.5	103.8	.....	½ c c
F	9 months	300	"	.....	103.7	103	.....	½ c c
F	9 months	300	"	.....	103	102.8	.....	½ c c
F	9 months	300	"	.....	103.8	102.6	.....	½ c c
F	9 months	300	"	.....	103.2	102.8	.....	½ c c
F	9 months	300	"	.....	103.8	102.2	.....	½ c c
F	9 months	300	"	.....	102.8	102.8	.....	½ c c
F	9 months	250	"	.....	103 4	102.7	.....	½ c c
F	2 years	600	"	.....	103.8	101.5	.....	1 c c
F	2 years	600	"	.....	102.8	101.6	.....	1 c c
F	2 years	900	"	.....	103	101.8	.....	2 c c
F	2 years	800	"	.....	102.8	102.5	.....	2 c c
F	2 years	600	"	.....	102.5	101.8	.....	1½ c c
F	2 years	700	"	.....	102.5	101.8	.....	1¾ c c
F	2 years	650	"	.....	103.8	102.2	.....	1½ c c
F	2 years	700	"	.....	103	101.9	.....	1¾ c c
F	2 years	650	"	.....	103.1	101.5	.....	1½ c c
F	2 years	900	"	.....	102.2	101.4	.....	2 c c
						10 p. m.		
F	3 years	800	Sept. 10 & 11	.....	.....	101.5	.....	2 c c
F	4 years	850	"	.....	.....	101	.....	2 c c
F	6 years	850	"	.....	.....	101.5	.....	2 c c
F	5 years	900	"	.....	.....	101	.....	2 c c
F	7 years	850	"	.....	.....	101	.....	2 c c
F	6 years	800	"	.....	.....	102	.....	2 c c
F	4 years	800	"	.....	.....	101¾	.....	2 c c
							10 p. m.	
F	5 years	800	"	.....	.....	.....	101½	2 c c
F	6 years	850	"	.....	.....	.....	102	2 c c
F	7 years	900	"	.....	.....	.....	102	2 c c
F	7 years	800	"	.....	.....	.....	101¼	2 c c
F	6 years	800	"	.....	.....	.....	101¼	2 c c
F	8 years	850	"	.....	.....	.....	101½	2 c c
F	8 years	800	"	.....	.....	.....	102	2 c c
F	6 months	400	"	.....	.....	.....	104	2 c c
F	6 months	400	"	.....	.....	.....	103¼	1½ c c
F	6 months	400	"	.....	.....	.....	103½	1½ c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Greene county:				
Ashland	Russell G. Sutton	Common		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Jefferson county:				
Watertown	J. N. Ball & Son	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"	1687	
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Black River	Perry Lamphear			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
Watertown	E. R. Taylor	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1368
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		

Appraisals and Awards—(*Continued*).

Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
			a. m.	10 a. m.	10 p. m.	10 p. m.	
.....	600	Sept. 10 & 11	.....	.....	.....	102⅕	1½ c c
.....	600	"	.....	.....	.....	102½	1½ c c
.....	550	"	.....	.....	.....	102¼	1½ c c
.....	600	"	.....	.....	.....	103	1½ c c
.....	600	"	.....	.....	.....	103	1½ c c
.....	600	"	.....	.....	.....	102½	1½ c c
.....	600	"	.....	.....	.....	104	1½ c c
.....	600	"	.....	.....	.....	103	1½ c c
.....	700	"	.....	.....	.....	102½	1½ c c
					5 p. m	7 p. m.	
.....	700	Nov. 21 and 22	.....	.....	101.6	102.4	2 c c
.....	700	"	.....	.....	102.4	102.2	2 c c
.....	700	"	.....	.....	102	102.8	2 c c
.....	700	"	.....	.....	101.8	102	2 c c
.....	700	"	.....	.....	102.4	102.4	2 c c
.....	700	"	.....	.....	102	102.6	2 c c
.....	700	"	.....	.....	102	102	2 c c
.....	700	"	.....	.....	102	102.6	2 c c
.....	700	"	.....	.....	102	101.6	2 c c
.....	700	"	.....	.....	102	101.4	2 c c
.....	700	"	.....	.....	102	102.2	2 c c
.....	700	"	.....	.....	102.8	102.2	2 c c
.....	700	"	.....	.....	101.4	101.6	2 c c
.....	700	"	.....	.....	101.8	101.6	2 c c
.....	700	"	.....	.....	101.8	102	2 c c
.....	700	"	.....	.....	102	102.2	2 c c
.....	700	"	.....	.....	101.8	101.6	2 c c
.....	700	"	.....	.....	102	101.8	2 c c
.....	700	"	.....	.....	101	101.6	2 c c
.....	700	"	.....	.....	102.4	102.6	2 c c
.....	700	"	.....	.....	101.8	101.8	2 c c
.....	700	"	.....	.....	102	102	2 c c
.....	700	"	.....	.....	102	102	2 c c
.....	700	"	.....	.....	101.6	101.8	2 c c
.....	700	"	.....	.....	100	100	2 c c
.....	700	"	.....	.....	101.2	101.4	2 c c
					5 a. m.	7 a. m.	
8.....	750	Aug. 27 and 28	.....	.....	102.6	102.6	2 c c
8.....	750	"	.....	.....	102.6	102.4	2 c c
8.....	750	"	.....	.....	102.2	102.2	2 c c
8.....	750	"	.....	.....	102.4	102.4	2 c c
8.....	750	"	.....	.....	102.4	102.2	2 c c
8.....	750	"	.....	.....	102.3	102.6	2 c c
8.....	750	"	.....	.....	102.4	102.2	2 c c
8.....	750	"	.....	.....	102.2	102.5	2 c c
8.....	750	"	.....	.....	102.2	102.4	2 c c
years....	700	Nov. 20 and 21	.....	.....	101.4	101.2	2 c c
years....	700	"	.....	.....	101.6	101 4	2 c c
years ..	700	"	.....	.....	101.6	101.6	2 c c
years....	700	"	.....	.....	102	102	2 c c
					5 p. m.	7 p. m.	
years....	.....	"	.....	.....	102 2	102 2	2 c c
years....	.....	"	.....	.....	102	101.6	2 c c
years....	.....	"	.....	.....	102.6	101.2	2 c c
years....	.....	"	.....	.....	102	101.2	2 c c
years....	.....	"	.....	.....	102	101.2	2 c c
years....	.....	"	.....	.....	102.2	102.8	2 c c
years....	.....	"	.....	.....	103	101	2 c c
years....	.....	"	.....	.....	101 8	102	2 c c
years....	.....	"	.....	.....	102.6	101.6	2 c c
years....	.....	"	.....	.....	102	102	2 c c
years....	.....	"	.....	.....	102.6	101.2	2 c c
years....	.....	"	.....	.....	101.4	101.2	2 c c
years....	.....	"	.....	.....	102	102	2 c c
years....	.....	"	.....	.....	101.8	101.6	2 c c
years....	.....	"	.....	.....	102.4	101 2	2 c c
years....	.....	"	.....	.....	102	101.8	2 c c
years ..	.....	"	.....	.....	102	102	2 c c
years....	.....	"	.....	.....	102	102	2 c c
years....	.....	"	.....	.....	101.8	101.8	2 c c
years....	.....	"	.....	.....	102.4	101.6	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Jefferson county;				
Watertown	E. R. Taylor	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1665
"	"	"		
"	T. E. Beecher	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	E. B. Emerson	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Hounsfield	A. R. Flower	Holstein	36570	
"	"	"	37565	
"	"	"	36569	
"	"	"	23379	
"	"	"	27175	
"	"	"	20792	
"	"	"	36568	
"	"	"	17203	
"	"	"	17202	
"	"	"	17204	
"	"	"	17824	
"	"	"	21231	
"	"	"	23144	
"	"	"	23145	
"	"	"	1672	
"	"	"	2809	
"	"	"	9096	1616
"	"	"	27378	
"	"	"	2174	
"	"	"	489	1617
"	"	"	264	
"	"	"	5989	
"	"	"	1447	
"	"	"	5984	
"	"	"	3312	
"	"	"	37060	
"	"	"	36567	
Le Ray	Albert Mahew	Native		
"	"	"		
"	"	"		
"	"	"		

ortems, Appraisals and Awards—(*Continued*).

ex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	6 p. m.	8 p. m.	
F	3 to 10 years....	.....	Nov. 20 and 21	.....	.....	102	102	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102.6	101.6	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102.2	102	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102	102	2 c c
F	3 to 10 years....	.....	" "	.....	.....	101.4	101.8	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102 6	101	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102.4	101.2	2 c c
F	3 to 10 years....	.....	" "	.....	.....	102.2	101.4	2 c c
							5 p. m.	
F	6 years	1,100	" "	.....	.....	.....	101	2 c c
F	5 years	1,100	" "	.....	.....	.....	101 8	2 c c
F	7 years	1,100	" "	.....	.....	.....	100	2 c c
F	6 years	1,200	" "	.....	.....	.....	101	2 c c
F	5 years	1,200	" "	.....	.....	.....	101	2 c c
F	4 years	1,100	" "	.....	.....	.....	101	2 c c
F	5 years	1,100	" "	.....	.....	.....	102	2 c c
F	3 years	1,100	" "	.....	.....	.....	101	2 c c
F	5 years	1,100	" "	.....	.....	.....	102	2 c c
F	6 years	1,000	" "	.....	.....	.....	101	2 c c
F	5 years	900	" "	.....	.....	.....	101.6	2 c c
F	4 years	900	" "	.....	.....	.....	102	2 c c
F	3 years	900	" "	.....	.....	.....	102	2 c c
							5.30 p.m	
F	6 years	900	" "	.....	.....	.....	101	2 c c
F	5 years	800	" "	.....	.....	.....	101.6	2 c c
F	7 years	900	" "	.....	.....	.....	101	2 c c
F	9 years	900	" "	.....	.....	.....	101	2 c c
F	6 years	900	" "	.....	.....	.....	101	2 c c
F	5 years	900	" "	.....	.....	.....	101.6	2 c c
F	4 years	900	" "	.....	.....	.....	101 8	2 c c
F	3 years	900	" "	.....	.....	.....	101.6	2 c c
F	4 years	900	" "	.....	.....	.....	101.8	2 c c
F	5 years	900	" "	.....	.....	.....	101	2 c c
F	3 years	900	" "	.....	.....	.....	101.8	2 c c
F	5 years	900	" "	.....	.....	.....	101 6	2 c c
F	4 years	900	" "	.....	.....	.....	101.6	2 c c
F	3 years	900	" "	.....	.....	.....	101 8	2 c c
F	10 years.....	1,000	" "	.....	.....	.....	102	2 c c
							9 p. m.	
F	1 year	1.000	Nov. 25 and 26	.....	.....	.....	102.4	2 c c
F	1 year	950	" "	.....	.....	.....	102	2 c c
F	1 year	900	" "	.....	.....	.....	102	2 c c
F	4 years	1,200	" "	.....	.....	.....	101	2 c c
F	4 years	1.200	" "	.....	.....	.....	101.4	2 c c
F	5 years	1,300	" "	.....	.....	.....	101	2 c c
F	2 years	1,000	" "	.....	.....	.....	102	2 c c
F	5 years	900	" "	.....	.....	.....	100.4	2 c c
F	5 years	1,200	" "	.....	.....	.....	101.4	2 c c
F	5 years	1.200	" "	.....	.....	.....	102	2 c c
F	4 years	1,200	" "	.....	.....	.....	101	2 c c
M	1 year	900	" "	.....	.....	.....	101.4	2 c c
F	4 years	1.100	" "	.....	.....	.....	101	2 c c
F	4 years	1,200	" "	.....	.....	.....	101.6	2 c c
F	10 years.....	1,450	" "	.....	.....	.....	101	2 c c
F	9 years	1,200	" "	.....	.....	.....	102	2 c c
F	9 years	1,200	" "	.....	.....	.....	101	2 c c
F	5 years	1,200	" "	.....	.....	.....	101.4	2 c c
F	5 years	1,200	" "	.....	.....	.....	102	2 c c
F	13 years.....	1,200	" "	.....	.....	.....	101	2 c c
F	10 years.....	1,200	" "	.....	.....	.....	100 6	2 c c
F	9 years	1,100	" "	.....	.....	.....	101	2 c c
F	10 years.....	1 100	" "	.....	.....	.....	101	2 c c
F	10 years.....	1,200	" "	.....	.....	.....	101.4	2 c c
F	10 years.....	1,200	" "	.....	.....	.....	101.6	2 c c
F	1 year	900	" "	.....	.....	.....	102	15 m
F	1 year	900	" "	.....	.....	.....	101	15 m
						6 p. m.		
F	6 years	1 100	Dec. 5 and 6	.....	.....	102	.....	2 c c
F	8 years	1 000	" "	.....	.....	100.6	.....	2 c c
F	5 years	1 100	" "	.....	.....	101.6	.....	2 c c
F	9 years	1 100	" "	.....	.....	102	.....	2 c c
F	7 year.....	1 100	" "	.....	.....	102	.....	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Jefferson county:				
Le Ray	Albert Mahew	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
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Watertown	Herbert Surnee	"		
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"	George H. Smith	"		
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"	"	"		
"	"	"		
"	"	"		
Montgomery county:				
Sprout Brook	Wm. E. Copley	"		
"	"	"		

ortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	6 p. m.	8 p. m.	
F	8 years	1,100	Dec. 5 and 6			102		2 c c
F	9 years	1,100	"			102		2 c c
F	9 years	1,100	"			101		2 c c
F	5 years	1,000	"			101.8		2 c c
F	9 years	1,100	"			101.2		2 c c
F	6 years	1,000	"			102		2 c c
F	7 years	1,200	"			101.2		2 c c
F	5 years	1,000	"			102		2 c c
F	7 years	1,000	"			101		2 c c
F	6 years	1,100	"			102		2 c c
F	7 years	1,100	"			101.8		2 c c
F	6 years	1,100	"			101 6		2 c c
F	6 years	1,100	"			102		2 c c
F	9 years	1,100	"			102		2 c c
F	9 years	1,100	"			102.8		2 c c
F	5 years	1,200	"			102		2 c c
						5 p. m.	7 p. m.	
F	6 years	700	"			101.6	101.8	2 c c
F	4 years	700	"			102	102.6	2 c c
F	4 years	700	"			102	101.6	2 c c
F	7 years	700	"			101.4	101.2	2 c c
F	9 years	700	"			101	101.2	2 c c
F	8 years	700	"			101	101.2	2 c c
F	10 years	700	"			101.8	102.2	2 c c
F	3 years	700	"			102	102 2	2 c c
F	5 years	700	"			101.6	102	2 c c
F	6 years	700	"			101.6	102	2 c c
F	4 years	700	"			102	101.6	2 c c
F	7 years	700	"			101 2	101.4	2 c c
							8 p. m.	
F	5 years	1,200	Nov. 19 and 20				102	2 c c
F	5 years	1,300	"				101	2 c c
F	5 years	1,300	"				101	2 c c
F	5 years	1,200	"				102.8	2 c c
F	4 years	1,200	"				101	2 c c
F	5 years	1,200	"				102	2 c c
F	5 years	1,200	"				101	2 c c
F	5 years	1,400	"				102	2 c c
F	6 years	1,300	"				101	2 c c
F	5 years	1,200	"				102	2 c c
F	7 years	1,300	"				102	2 c c
F	6 years	1,200	"				100	2 c c
F	6 years	1,200	"				101	2 c c
F	7 years	1,200	"				102	2 c c
F	5 years	1,300	"				101.6	2 c c
F	4 years	1,200	"				101.8	2 c c
F	6 years	1,200	"				102	2 c c
F	5 years	1,300	"				102	2 c c
F	7 years	1,200	"				101.6	2 c c
F	7 years	1,200	"				102.4	2 c c
F	5 years	1,200	"				101.8	2 c c
F	6 years	1,200	"				101	2 c c
F	5 years	1,200	"				102	2 c c
F	4 years	900	"				102	2 c c
F	4 years	1,200	"				102.2	2 c c
F	5 years	1,000	"				102	2 c c
F	5 years	1,200	"				101.8	2 c c
F	5 years	1,200	"				102	2 c c
F	9 years	1,200	"				103	2 c c
F	5 years	1,200	"				102	2 c c
F	4 years	1,300	"				101	2 c c
F	4 years	1,200	"				101	2 c c
F	5 years	1,200	"				101	2 c c
F	4 years	1,000	"				102	2 c c
F	5 years	1,000	"				101.8	2 c c
F	4 years	900	"					2 c c
F	3 years	1,000	"				102	2 c c
F	4 years	1,000	"				101.6	2 c c
F	4 years	1,000	"				101.8	2 c c
							10 p. m.	
F	7 years	900	Aug. 20 and 21				101	2 c c
F	9 years	1,000	"				101.5	2 c c

Table of Tuberculin Tests,

Location.	OWNER.	Breed.	Registered No.
Montgomery county:			
Sprout Brook	Wm. E. Copley	Native	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Oneida county:			
Boonville	Edwin M. Sperry	"	
"	"	Grade Holstein	
"	"	"	
"	"	"	
"	"	"	
"	"	Native	
"	"	Holstein	
Marcey	E. M. Marson	Native	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	1,658
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Boonville	J. W. Douglas, M. D.	"	
"	"	"	
"	"	"	
"	"	"	
"	"	Grade	
"	"	Native	
"	"	"	
"	"	"	

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	5 p. m.	10 p. m.	
F	6 years	900	Aug. 20 and 21				101	2 c c
F	5 years	900	"				101	2 c c
F	8 years	850	"				101.5	2 c c
F	4 years	850	"				101	2 c c
F	6 years	850	"				101.5	2 c c
F	5 years	850	"				101¾	2 c c
F	6 years	850	"				103	2 c c
F	5 years	900	"				101¾	2 c c
F	3 years	800	"				101.5	2 c c
M	3 years	900	"				102.5	2 c c
F	4 years	800	"				102	2 c c
F	2 years	700	"				102¼	2 c c
F	2 years	700	"				102	2 c c
							10 p. m	
F	4 years	900	July 15 and 16				102	2 c c
F	5 years	900	"				102.5	2 c c
F	6 years	900	"				102	2 c c
F	5 years	850	"				101½	2 c c
F	1 year	600	"				102	1 c c
F	1 year	600	"				102	1 c c
M	4 months	300	"				102	1 c c
							8 p. m.	
F	7 years	1,050	Sept. 20 and 21				103	2 c c
F	8 years	1,100	"				103	2 c c
F	5 years	700	"				104	2 c c
F	8 years	1,100	"				103	2 c c
F	6 years	1,000	"				102.6	2 c c
F	10 years	1,100	"				102	2 c c
F	9 years	1,000	"				103	2 c c
F	5 years	1,000	"				104	2 c c
F	9 years	1,100	"				103	2 c c
F	7 years	1,000	"				103	2 c c
F	8 years	1,000	"				102.4	2 c c
F	8 years	1,150	"				102.8	2 c c
F	6 years	1,100	"				103.8	2 c c
F	9 years	1,000	"				101	2 c c
F	8 years	1,200	"				104	2 c c
F	7 years	900	"				103	2 c c
F	7 years	1,000	"				104	2 c c
F	8 years	1,200	"				106	2 c c
F	5 years	1,100	"				103	2 c c
F	9 years	900	"				104	2 c c
F	4 years	1,000	"				105	2 c c
F	7 years	1,100	"				103	2 c c
F	6 years	1,000	"				103	2 c c
F	7 years	900	"				104	2 c c
F	9 years	1,000	"				104	2 c c
F	7 years	1,100	"				103	2 c c
F	9 years	1,200	"				103	2 c c
F	5 years	1,200	"				103	2 c c
F	6 years	1,100	"				102.4	2 c c
F	7 years	900	"				103	2 c c
F	8 years	1,000	"				103	2 c c
F	5 years	1,200	"				103	2 c c
F	7 years	1,100	"				102	2 c c
F	6 years	1,200	"				102	2 c c
F	6 years	1,000	"				103	2 c c
F	9 years	1,200	"				102	2 c c
F	9 years	1,200	"				102 4	2 c c
F	10 years	1,100	"				102	2 c c
F	10 years	1,100	"				103	2 c c
F	8 years	1,200	"				101.8	2 c c
F	6 years	1,000	"				102.4	2 c c
F	9 years	1,200	"				103	2 c c
F	6 years	1,000	"				104.6	2 c c
							8.30. p m	
F	10 years	1,200	Sept. 28 and 29.				102	2 c c
F	5 years	1,200	"				102	2 c c
F	8 years	1,200	"				101.8	2 c c
F	6 years	1,200	"				101.8	2 c c
F	6 years	1,200	"				101 4	2 c c
F	8 years	1,200	"				101.6	2 c c
F	11 years	1,200	"				101.2	2 c c
F	11 years	950	"				102	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Oneida county:				
Boonville	J. W. Douglas, M. D	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Onondaga county:				
Baldwinsville	John Revoir			
"	"			
"	"			
"	"			1662
"	"			1663
"	"			1664
De Witt	Charles Pratt	Holstein	20617	1601
"	"	"	20482	
"	"	"	20619	
"	"	"	19963	
"	"	"	17431	
"	"	"	5317	
"	"	"	23542	
"	"	"	2289	
"	"	"	35092	
"	"	"	36309	
"	"	"	36326	
"	"	"	32589	
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Manlius	W. Higgins			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
Clay	Mrs. C. Houghton	Grade Jersey		
"	"	"		
"	"	"		
Orange county:				
P. O. Newburgh	George W. Watts	Common		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"	1988	
"	"	"		

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	5 p. m.	8.30 p m	
							8.30	
F	9 years	900	Sept. 28 and 29				101	2 c c
F	8 years	900	"				101.6	2 c c
F	5 years	900	"				101	2 c c
F	7 years	900	"				101	2 c c
F	4 years	900	"				102.8	2 c c
F	2 years	900	"				103	2 c c
F	2 years	900	"				102	2 c c
F	11 years	900	"				101.4	2 c c
F	2 years	900	"				103.4	2 c c
F	2 years	900	"				102.2	2 c c
F	6 years	900	"				101	2 c c
F	2 years	1,100	"				102	2 c c
F	11 years	900	"				102	2 c c
F	8 years	1,100	"				102	2 c c
							8 p. m.	
M	2 years	300	July 22 and 23				102.6	2 c c
F	4 years	450	"				103.2	2 c c
F	2 years	300	"				103	2 c c
F	12 years	450	"				102.2	2 c c
F	6 years	800	"				102	2 c c
F	13 years	800	"				101.2	2 c c
F	2 years	450	"				103.2	2 c c
							11 p. m.	
F	5 years	800	July 26 and 27				101.4	2 c c
F	5 years	900	"				103.2	2 c c
F	5 years	1,200	"				102.2	2 c c
F	5 years	650	"				102.2	2 c c
F	6 years	1,200	"				102.3	2 c c
F	8 years	1,100	"				103.2	2 c c
F	5 years	1,200	"				102	2 c c
F	13 years	1,200	"				102	2 c c
F	2 years	800	"				103	2 c c
F	2 years	700	"				103	2 c c
F	2 years	700	"				102.4	2 c c
F	3 years	650	"				102	2 c c
M	11 months	500	"				103	2 c c
F	1 week	100	"				103.2	10 m
F	5 months	200	"				103	13 m
F	11 months	400	"				102.2	15 m
F	10 months	300	"				102.4	15 m
F	10 months	300	"				103	15 m
F	10 months	300	"				102.3	15 m
							8 p. m.	
F	7 years	750	Aug. 20 and 21				101	2 c c
F	6 years	800	"				100	2 c c
F	5 years	750	"				101.2	2 c c
F	5 years	700	"				99.2	2 c c
F	3 years	750	"				102	2 c c
F	7 years	800	"				101	2 c c
F	8 years	900	"				101.4	2 c c
F	8 years	900	"				101	2 c c
F	9 years	800	"				101	2 c c
F	2 years	900	"				101	2 c c
F	2 years	600	"				103	2 c c
F	1 year	600	"				102	25 m
F	1 year	555	"				103	25 m
F	2 years	600	"				103	2 c c
F	3 years	800	Dec. 3 and 4				101.8	2 c c
F	3 years	800	"				101.6	2 c c
F	4 years	800	"				102	2 c c
F	4 years	700	"				104	2 c c
							7 p. m.	
F	6 years	900	Aug. 22 and 23				102¼	2 c c
F	5 years	850	"				102¾	2 c c
F	3 years	950	"				102¾	2 c c
F	4 years	750	"				102¼	2 c c
F	4 years	800	"				101¾	2 c c
F	5 years	1,000	"				102	2 c c
F	2 years	1,000	"				102½	2 c c
F	9 years	1,200	"				101	2 c c
F	1 year	500	"				103	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Orange county:				
P. O. Newburgh	George W. Watts	Common		
Pine Bush	J. S. Miller	Holstein		1997
"	"	Grade		1978
"	"	"		1979
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1980
"	"	"		1981
"	"	"		1988
"	"	"		
"	"	"		
"	"	"		
"	"	"		1989
"	"	"		
"	"	"		1984
"	"	Holstein		
"	"	Grade		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Goshen	Poorhouse farm	Native		
"	"	"		
"	"	"		
"	"	"		1985
"	"	"		
"	"	"		1971
"	"	"		1965
"	"	"		1972
"	"	"		1988
"	"	"		
"	"	"		1965
"	"	"		1949
"	"	"		1980
"	"	"		1961
"	"	"		
"	"	"		1988
"	"	"		1970
"	"	"		
"	"	"		1989
"	"	"		1761
"	"	"		
"	"	"		
"	"	"		1979
"	"	"		1768
"	"	"		1988
"	"	"		1963
"	"	"		
"	"	"		1964
"	"	"		1978
"	"	"		1984
"	"	"		
Oswego county:				
New Haven	Edward Lee	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		

ortems, Appraisals and Awards—(*Continued*).

	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	5 p. m.	7 p. m.	
	7 years	1,100	Aug. 22 and 23				102	2 c c
							7 p. m.	
I	4 years	1,000	Aug. 29 and 30				103	3 c c
	4 years	700	"				102	2 c c
	4 years	800	"				102¼	2 c c
	4 years	1,000	"				102½	2 c c
	4 years	900	"				101¼	2 c c
	6 years	1,000	"				103	2 c c
	9 years	1,000	"				102	2 c c
	10 years	900	"				102¼	2 c c
	10 years	1,100	"				101½	2 c c
	8 years	900	"				101½	2 c c
	6 years	700	"				101¾	2 c c
	7 years	800	"				102½	2 c c
	4 years	700	"				101½	2 c c
	4 years	600	"				102¼	2 c c
	4 years	650	"				101¾	2 c c
	5 years	800	"				102¼	2 c c
	4 years	700	"				101½	2 c c
	5 years	700	"				102½	2 c c
F	2 years	500	"				103	2 c c
F	2 years	600	"				102¾	2 c c
F	5 years	700	"				102¼	2 c c
F	4 years	750	"				101¾	2 c c
F	1 year	300	"				103½	1 c c
F	1 year	350	"				103¾	1 c c
F	1 year	300	"				103¾	1 c c
F	1 year	300	"				103	1 c c
							6 P. M.	
M	6 years	1,900	Nov. 5 and 6				101¾	3 c c
M	6 years	1,900	"				101	3 c c
M	5 years	1,800	"				102¼	3 c c
M	5 years	1,800	"				101¾	3 c c
M	5 years	1,000	"				102¾	2 c c
F	7 years	1,000	"				102¾	2 c c
F	7 years	800	"				102¼	2 c c
F	6 years	800	"				101½	2 c c
F	2 years	800	"				101¾	2 c c
F	10 years	1,200	"				102	2 c c
F	8 years	1,100	"				103	2 c c
F	9 years	1,200	"				103	2 c c
F	6 years	900	"				102	2 c c
F	10 years	950	"				102	2 c c
F	10 years	950	"				102	2 c c
F	5 years	1,000	"				102¼	2 c c
F	5 years	1,100	"				102	2 c c
F	6 years	1,200	Nov. 6 and 7				102½	2 c c
F	6 years	1,200	"				102¾	2 c c
F	5 years	1,100	"				104	2 c c
F	7 years	1,150	"				101½	2 c c
F	5 years	1,100	"				102½	2 c c
F	6 years	1,200	"				102	2 c c
F	9 years	1,200	"				101¾	2 c c
F	8 years	1,150	"				102¾	2 c c
F	12 years	1,050	"				103	2 c c
F	9 years	1,200	"				102	2 c c
F	5 years	950	"				102	2 c c
F	6 years	900	"				103½	2 c c
F	8 years	1,200	"				104¼	3 c c
F	2 years	900	"				104	2 c c
M	4 years	2,000	"				101¼	4 c c
							8 p. m.	
F	3 years	800	Dec. 20 and 21				103	2 c c
F	3 years	800	"				103.2	2 c c
F	3 years	700	"				103.2	2 c c
F	3 years	600	"				102.2	2 c c
F	3 years	700	"				102	2 c c
F	3 years	800	"				103	2 c c
F	3 years	800	"				101.8	2 c c
F	3 years	900	"				102.2	2 c c
F	3 years	800	"				102.2	2 c c
F	3 years	800	"				100.6	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Oswego county:				
New Haven	Edward Lee	Native		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Otsego county:				
Schenevus	Dow M. Webster	Common		1744
"	"	"		1734
"	"	"		1733
"	"	"		1705
"	"	Jersey		1748
"	"	"		1750
"	"	"		1717
"	"	"		1739
"	"	Common		1738
"	"	"		1708
"	"	Jersey		1722
"	"	"		1725
"	"	"		
"	"	"		1729
"	"	"		1736
"	"	"		1709
"	"	"		
"	"	"		1747
"	"	Common		1712
"	"	Jersey		1746
"	"	"		
"	"	Holstein		
"	"	Common		
"	"	Jersey		
"	Mrs. Maria McCabe	Holstein		1733
"	"	Common		1707
"	"	Jersey		1731
"	"	"		1730
"	"	"		1701
Oneonta	Anson Bingham	Common		1713
"	"	"		
"	"	"		
"	"	"		
"	"	"		1721
"	"	"		1702
"	"	"		1720
"	"	"		
"	"	"		1711
"	"	"		1735
"	"	"		1742
Otego	Roland Trask	Jersey		
"	"	Holstein		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	Jersey		
"	"	Ayrshire		
"	"	"		1736
Oneonta	Frank C. Sessions	Jersey		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1727
"	"	Guernsey		1741

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	5 p. m.	8 p. m.	
F	3 years	700	Dec. 20 and 21				103	2 c c
F	3 years	900	"				103	2 c c
F	4 years	1,000	"				102.2	2 c c
F	4 years	1,000	"				101	2 c c
F	5 years	1,000	"				101.4	2 c c
F	3 years	1,000	"				101.4	2 c c
F	4 years	1,000	"				102	2 c c
F	3 years	900	"				102	2 c c
F	4 years	1,000	"				102.2	2 c c
F	6 years	900	"				102.6	2 c c
F	5 years	900	"				102.2	2 c c
F	7 years	800	"				102	2 c c
							10 p. m.	
F	4 years	850	July 23 and 24				101½	2 c c
F	6 years	950	"				101	2 c c
F	7 years	900	"				102	2 c c
F	7 years	990	"				102½	2 c c
F	4 years	850	"				101¾	2 c c
F	3 years	800	"				102¾	2 c c
F	4 years	850	"				101½	2 c c
F	2 years	750	"				102¼	2 c c
F	8 years	800	"				102¼	2 c c
F	3 years	800	"				101¾	2 c c
F	4 years	900	"				101¾	2 c c
F	7 years	900	"				101¾	2 c c
F	4 years	900	"				101½	2 c c
F	7 years	1,000	"				102	2 c c
F	7 years	800	"				102¼	2 c c
F	4 years	750	"				102	2 c c
F	4 years	800	"				102	2 c c
F	3 years	700	"				101¼	2 c c
F	7 years	700	"				102½	2 c c
M	3 years	1,150	"				103	2 c c
F	1 year	500	"				102	1 c c
M	1 year	600	"				102½	2 c c
F	1 year	500	"				102	1 c c
F	1 year	425	"				102	1 c c
F	10 years	950	July 24 and 25				101	2 c c
F	7 years	950	"				102	2 c c
F	9 years	900	"				101¾	2 c c
F	6 years	900	"				101½	2 c c
F	3 months	150	"				103	1 c c
F	7 years	900	July 29 and 30				102	2 c c
F	8 years	1,000	"				101½	2 c c
F	3 years	750	"				101¾	2 c c
F	9 years	850	"				102	2 c c
F	10 years	850	July 29 and 30				102	2 c c
F	8 years	900	"				101¾	2 c c
F	8 years	900	"				101½	2 c c
F	10 years	900	"				101½	2 c c
F	7 years	800	"				102	2 c c
F	3 years	750	"				102½	2 c c
F	7 years	800	"				102¾	2 c c
F	5 years	900	July 30 and 31				102	2 c c
F	2 years	600	"				103	2 c c
F	2 years	600	"				102¼	2 c c
F	2 years	700	"				102¼	2 c c
F	2 years	650	"				103	2 c c
F	2 years	600	"				102½	2 c c
F	2 years	650	"				103	2 c c
F	2 years	600	"				102½	2 c c
M	2 years	550	"				103½	2 c c
M	2 years	650	"				103	2 c c
F	3 years	700	"				103	2 c c
F	3 years	700	"				103	2 c c
F	7 years	900	Aug. 26 and 27				101½	2 c c
F	6 years	900	"				101½	2 c c
F	6 years	900	"				101	2 c c
F	5 years	850	"				101¾	2 c c
F	5 years	850	"				102	2 c c
F	4 years	900	"				101½	2 c c
F	5 years	900	"				102½	2 c c

Table of Tuberculin Tests,

Location.	OWNER.	Breed.	Registered No.
Otsego county:			
Oneonta	**Frank C Sessions**	**Jersey**	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Roseboom	**M. A. Becker**	"	
"	"	"	771
"	"	"	509
"	"	"	771
"	"	"	771
"	"	"	771
"	"	"	771
"	"	"	669
"	"	"	666
Westford	**Edwin Lynes**	**Native**	
"	"	**Jersey**	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Schenevus	**Samuel Reynolds**	**Common**	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	**Flynn & Searer**	"	
"	"	"	
"	"	"	
"	"	"	
"	"	**Jersey**	
"	"	**Common**	
"	"	"	
"	"	"	
"	"	"	
Maryland	H. L. Burnsides	"	
"	"	"	
"	"	"	
"	"	**Jersey**	
"	"	Common	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
"	"	Common	
"	"	"	
"	"	"	
"	"	"	
"	"	"	
Westford	Riva Bostwick	"	
"	"	"	
"	"	"	
"	"	"	

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	5 p. m.	8 p. m.	
F	4 years	850	Aug. 26 and 27				101½	2 c c
F	4 years	900	"				101½	2 c c
F	5 years	800	"				102	2 c c
F	5 years	800	"				102½	2 c c
F	6 years	850	"				102	2 c c
F	6 years	900	"				101½	2 c c
F	5 years	750	"				102	2 c c
F	3 years	700	"				102	2 c c
F	2 years	650	"				103	2 c c
						4 p. m.	8 p. m.	
F	3 years	800	Sept. 8 and 9			101	101.6	2 c c
F	5 years	900	"			102	102.2	2 c c
F	7 years	900	"			101.8	102	2 c c
F	6 years	900	"			101	101.6	2 c c
F	5 years	900	"			101.2	101.4	2 c c
F	7 years	900	"			102	102.6	2 c c
F	9 years	900	"			101.6	102	2 c c
F	5 years	1,000	"			101.6	101.8	2 c c
F	6 years	1,000	"			101	101	2 c c
							10 p. m.	
F	7 years	900	Oct. 2 and 3				102	2 c c
F	8 years	900	"				102	2 c c
F	5 years	850	"				101	2 c c
F	2 years	750	"				101	2 c c
F	3 years	700	"				102	2 c c
F	2 years	700	"				102	2 c c
F	3 years	700	"				100	2 c c
F	2 years	700	Oct. 16 and 17				102	2 c c
F	4 years	800	"				103	2 c c
F	2 years	700	"				102	2 c c
F	2 years	700	"				101½	2 c c
F	2 years	700	"				102¾	2 c c
M	2 years	700	"				102	2 c c
F	2 years	700	"				102	2 c c
F	2 years	700	"				101¼	2 c c
F	2 years	700	"				102½	2 c c
F	2 years	700	"				101½	2 c c
F	2 years	700	"				101½	2 c c
F	2 years	700	"				102	2 c c
M	2 years	700	"				102¼	2 c c
F	2 years	700	"				102½	2 c c
F	2 years	700	"				102	2 c c
F	2 years	700	"				102	2 c c
F	5 months	700	"				102	2 c c
F	5 months	700	"				102½	2 c c
F	3 months	700	Dec. 14 and 15				101	2 c c
F	5 months	800	"				101	2 c c
F	5 months	900	"				101¼	2 c c
F	6 months	800	"				100½	2 c c
F	6 months	900	"				100	2 c c
F	5 months	800	"				101	2 c c
F	5 months	800	"				101½	2 c c
F	4 months	850	"				100	2 c c
F	6 months	800	"				101½	2 c c
F	8 months	950	Oct. 15 and 16				101¼	2 c c
F	9 months	900	"				103	2 c c
F	6 months	850	"				101	2 c c
F	7 months	850	"				106	2 c c
F	5 months	750	"				101	2 c c
F	6 months	750	"				104	2 c c
F	4 months	750	"				102	2 c c
F	5 months	900	"				102	2 c c
F	7 months	800	"				101	2 c c
F	4 years	800	"				102	2 c c
F	3 years	750	"				101	2 c c
F	5 years	750	"				102½	2 c c
F	3 years	750	"				101½	2 c c
F	3 years	750	"				102	2 c c
F	8 years	800	Nov. 22 and 23				101¼	2 c c
F	5 years	700	"				100¼	2 c c
F	9 years	800	"				100½	2 c c
F	3 years	600	"				100¾	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Putnam county:				
Carmel	H. Colwell	Grade		1955
"	"	"		
"	"	"		1956
"	"	"		1957
"	"	"		
"	"	"		
"	"	"		
"	"	"		1958
"	"	"		1959
"	"	"		
"	"	"		1960
"	Byron Sutton	Jersey		
"	"	"		
"	"	"		1850
"	"	"		1760
"	"	"		1761
"	"	"		
"	"	"		
"	"	"		1762
"	"	"		
"	"	"		1763
"	"	"		
"	"	"		
"	"	"		1849
Wynantskill	Parker Bristol	Holstein	27959	1735
"	"	"	25339	1709
"	"	"	27957	1738
"	"	"		1748
"	"	Common Holstein		
"	"	"		
"	"	"		1729
St. Lawrence county:				
Gouverneur	Fremont K. Noble	Grade		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Schenectady county:				
Glenville	David Smith	Jersey		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Niskayuna	J. W. Smitley	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		1713
"	"	"		
"	"	"		

ıortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination	Temperature Before Injection.				Amount injected.
				a. m.	a. m.	4 p. m.	10 p. m.	
							6 p. m.	
F	4 years	890	July 29 and 30				102½	2 c c
F	6 years	900	"				102¼	2 c c
F	9 years	1,000	"				105¼	2 c c
F	5 years	1,050	"				102½	2 c c
F	6 years	1,000	"				102¾	2 c c
F	4 years	950	"				102½	2 c c
F	4 years	900	"				101¾	2 c c
F	7 years	1,100	"				104¾	2 c c
F	5 years	1,050	"				103½	2 c c
F	8 years	900	"				101¾	2 c c
F	8 years	950	"				103	2 c c
						6 p. m.	8 p. m.	
F	7 years	1,000	Sept. 16 and 17			102½	102½	2 c c
F	7 years	900	"			103½	103½	2 c c
F	8 years	1,200	"			102	102	2 c c
F	6 years	1,000	"			103½	103	2 c c
F	7 years	1,100	"			104	103½	2 c c
F	9 years	1,100	"			104	103	2 c c
F	7 years	1,100	"			102½	102½	2 c c
F	5 years	1,150	"			103½	103	2 c c
F	7 years	1,000	"			102¾	102¾	2 c c
F	6 years	1,000	"			103¼	103	2 c c
F	6 years	1,150	"			103	103	2 c c
F	5 years	900	"			104	103½	2 c c
F	7 years	1,000	"			103¾	103	2 c c
F	7 years	1,100	"			102¾	102¾	2 c c
							10 p. m.	
F	8 years	900	Dec. 2 and 3				102½	2 c c
F	9 years	950	"				102	2 c c
F	6 years	900	"				101¾	2 c c
F	6 years	700	"				103¼	2 c c
F	10 years	1,000	"				103	2 c c
F	1½ years	700	"				101¾	2 c c
F	1½ years	700	"				102¾	2 c c
F	1½ years	700	"				101½	2 c c
							8 p. m.	
F	5 years	1,000	Oct. 17 and 18				101	2 c c
F	7 years	1,000	"				101.4	2 c c
F	6 years	1,100	"				101.4	2 c c
F	5 years	1,000	"				101	2 c c
F	8 years	900	"				101.2	2 c c
F	7 years	1,000	"				102	2 c c
F	6 years	1,000	"				104.4	2 c c
F	4 years	1,100	"				102	2 c c
F	5 years	1,000	"				100.8	2 c c
F	6 years	1,100	"				101	2 c c
F	2 years	900	"				102.4	2 c c
							10 p. m.	
M	3 years	900	Aug. 24 and 25				102	2 c c
F	4 years	800	"				103	2 c c
F	6 years	700	"				102	2 c c
F	5 years	700	"				102½	2 c c
F	4 years	700	"				102½	2 c c
F	3 years	860	Aug. 23 and 24				102	2 c c
F	3 years	600	"				102½	2 c c
F	4 years	800	"				102½	2 c c
F	6 years	800	"				102	2 c c
F	2 years	700	"				102½	2 c c
F	4 years	750	"				103	2 c c
F	2 years	650	"				102	2 c c
F	4 years	700	"				103	2 c c
F	2 years	650	"				103	2 c c
M	2 years	800	Nov. 19 and 20				101½	2 c c
F	2 years	700	"				102	2 c c
F	6 years	800	"				102	2 c c
F	4 years	900	"				102	2 c c
F	3 years	800	"				102	2 c c
F	10 years	800	"				101½	2 c c
F	6 years	700	"				102	2 c c
F	8 years	800	"				101¼	2 c c
F	10 years	800	"				102¼	2 c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Schenectady county:				
Niskayuna	J. W. Smithley	Jersey		175
"	"	"		
"	"	"		176
Schuyler county:				
Montour	B. M. Wager	Grade		
"	"	"		
"	"	"		
"	"	Jersey		
"	"	Grade		
"	"	"		
"	"	"		
Steuben county:				
Corning	J. H. Brown	Native		
"	"	"		59
"	"	Three-quarter Jersey		164
"	"	Native		
"	"	"		203
"	"	"		206
"	"	"		
"	"	"		214
"	"	"		215
"	"	"		234
"	"	"		247
"	"	"		
"	"	"		
Tioga county:				
Owego	G. M. Griswold	Grade Jersey		229
"	"	Jersey		231
"	"	Grade Jersey		233
"	"	Native		235
"	"	Jersey		236
"	"	Grade Jersey		237
"	"	Jersey		238
"	"	"	102234	239
"	"	"	41399	240
"	"	Native		253
"	"	Jersey		
"	"	Grade Jersey		
"	"	"		
"	Byron J. Jenks	Grade Durham		91
"	"	*Grade Jersey		92
"	"	Holstein		94
"	"	Grade Durham		95
"	"	Grade Holstein		96
"	"	Durham		
"	"	Grade Holstein		97
"	"	Holstein		99
"	"	Jersey and Guernsey		
"	"	Jersey		101
"	"	Guernsey & Durham		102
"	"	Holstein	8909	124
"	"	Grade Durham		127
"	"	Guernsey and Jersey		
"	"	Durham and Jersey		173
"	"	Grade Jersey		178
"	"	Durham		180
"	"	Holstein		181
"	"	Durham & Guernsey		182
"	"	Holstein		183
"	"	Grade Durham		
"	"	Durham		184
"	"	"		186
"	"	Grade Jersey		196
"	"	Grade Durham		197
"	"	Holstein		

mortems, Appraisals and Awards—(*Continued*).

Sex.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a. m.	6 p. m.	10 p. m.	
F	8 years	750	Nov. 19 and 20				101	2 c c
F	8 years	750	"				101	2 c c
F	6 years	800	"				102½	2 c c
F	3 years	750	"				102	2 c c
							9 p m.	
F	5 years	900	Dec. 11 and 12				102.6	2 c c
F	6 years	900	"				101.8	2 c c
F	4 years	800	"				102.4	2 c c
F	7 years	800	"				101	2 c c
M	5 years	900	"				101	2 c c
F	2 years	800	"				103	2 c c
F	2 years	700	"				102	2 c c
F	2 years	700	"				101	2 c c
F	2 years	700	"				102	2 c c
						4 p. m.	6.30 p m	
F	9 years	1,000	Sept. 13 and 14			102.3	101.8	2 c c
F	9 years	1,000	"			102	101.3	2 c c
F	11 years	750	"			101.8	101.8	2 c c
F	Aged	900	"			101.8	101	2 c c
F	6 years	900	"			101.7	101.5	2 c c
F	6 years	950	"			102	101.5	2 c c
F	11 years	850	"			101.8	101.6	2 c c
F	7 years	850	"			101.3	101	2 c c
F	2 years	550	"			101.7	101.2	1½ c c
F	7 years	800	"			102.2	101.4	2 c c
F	5 years	850	"			101.2	101	2 c c
F	8 years	1,100	"			101.7	101.3	2 c c
F	7 years	850	"			101.5	101	2 c c
F	7 years	850	"			102.1	101.8	2 c c
F	2 years	500	Sept. 28 and 29.				102	1½ c c
F	3 years	600	"				102.2	1½ c c
F	2 years	600	"				102.3	1½ c c
F	8 years	700	"				102.3	2 c c
F	7 years	900	"				101.3	2 c c
F	7 years	550	"				102.8	2 c c
F	8 years	700	"				102.4	2 c c
F	4 years	750	"				101.5	2 c c
F	10 years	800	"				101	2 c c
F	4 years	1,000	"				101.5	2 c c
F	5 months	165	"				102.7	½ c c
F	6 months	250	"				102	½ c c
F	6 months	175	"				102.6	½ c c
						4 p. m.	7 p. m.	
F	4 years	800	Oct. 7 and 8			101	101	2 c c
F	9 years	750	"			102.4	103	2 c c
F	2 years	850	"			101	101.2	2 c c
F	7 years	800	"			103.2	104.2	2 c c
F	7 years	850	"			101	101.5	2 c c
F	9 years	900	"			101.7	102.8	2 c c
F	3 years	650	"			100.8	102.4	2 c c
F	10 years	1,100	"			102	102.4	2½ c c
F	9 years	800	"			101	102.1	2 c c
F	6 years	950	"			102.4	102.8	2 c c
F	2 years	750	"			101.5	101.8	2 c c
F	8 years	1,200	"			102	102.8	2½ c c
F	7 years	650	"			103.8	104.4	2½ c c
F	11 years	900	"			102.8	103	2½ c c
F	3½ years	900	"			101.3	101.8	2½ c c
F	6 years	800	"			102.1	102.2	2½ c c
F	4 years	800	"			101.1	101.4	2½ c c
F	4 years	900	"			102	102.4	2½ c c
F	7 years	950	"			101.5	102	2½ c c
F	9 years	900	"			101.8	102	2 c c
F	1½ years	500	"			101.8	101.2	1½ c c
F	5 years	900	"			101.8	102	2 c c
F	2½ years	400	"			102	102.2	1 c c
F	2½ years	600	"			104.5	104.4	1¾ c c
F	7 years	900	"			101.7	101.8	2 c c
F	1½ years	500	"			102.8	102.5	1½ c c

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Tioga county:				
Owego	Byron J. Jenks	Grade Durham		
"	"	Holstein		269
"	"			
"	"	*Grade Durham		941
"	"	Holstein		
"	"	Durham		
"	Lorenzo N. De Groot	Native		
"	"	"		
"	"	"		271
"	"			
"	"	Grade Guernsey		275
"	"	Native		
"	"			276
"	"	Grade Jersey		
"	"	Native		277
"	"	"		
"	"	"		
"	"	"		278
"	"	"		
"	"	"		
"	"	"		
"	"	"		279
"	"	"		
"	"	Holstein		
"	"	Native		
"	W. W. Thomas	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Ulster county:				
Oakes	G Van B. Roberts	Grade		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
Warren county:				
Bolton	Alma Farm (Theo. F. H. Meyer, manager)	Jersey	113670	201
"	"	"		
"	"	"	113660	202
"	"	"	44008	203
"	"	"	113665	204
"	"	"	113666	205
"	"	"		
"	"	"	41170	206
"	"	"	47603	207
"	"	"	54105	208

* No tuberculin; reaction diag

ortems, Appraisals and Awards—(*Continued*).

ows.	Age.	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
				a. m.	a m.	4 p. m.	7 p. m.	
	1½ years	400	Oct. 7 and 8			103.1	103.5	1 c c
	2 years	1,200	"			103.5	102	3 c c
	1½ years	600	"			104.3	102.2	1½ c c
	2 years	600	"			103.4	104	1¾ c c
	1½ years	500	"			101.8	101.7	1½ c c
	1½ years	700	"			102.5	102	1¾ c c
						5 p. m.	8 p. m.	
	7 years	900	Oct. 21 and 22			101.8	101	2 c c
	8 years	900	"			102.4	102	2 c c
	12 years	950	"			102.4	102	2 c c
	8 years	1,000	"			102.5	101.6	2 c c
	4 years	750	"			101.8	101	2 c c
	8 years	850	"			102.3	102	2 c c
	12 years	900	"			102	101.2	2 c c
	3½ years	700	"			103	102.7	2 c c
	2½ years	750	"			102.5	101.8	2 c c
	2½ years	700	"			102	102	2 c c
	4 years	1,000	"			102.1	101.1	2 c c
	5 years	1,000	"			104.7	104.7	2 c c
						5 p. m.	8 p. m.	
	6 years	800	"			102	102	2 c c
	2½ years	600	"			103.6	102.8	1½ c c
	1½ years	550	"			103.1	102	1½ c c
	1½ years	550	"			104.3	104.6	1½ c c
	1½ years	550	"			103.2	102.5	1½ c c
	1 year	450	"			103.8	103	1 c c
	1½ years	900	"			103.4	102.5	2½ c c
	9 months	250	"			104	103.5	½ c c
						9 p. m.		
	6 years	900	Nov. 11 and 12			99		2 c c
	8 years	900	"			100		2 c c
	7 years	900	"			99		2 c c
	5 years	800	"			98		2 c c
	4 years	900	"			101.6		2 c c
	3 years	800	"			102		2 c c
	7 years	900	"			101.6		2 c c
	6 years	900	"			102		2 c c
	5 years	900	"			101.6		2 c c
	9 years	800	"			102		2 c c
	7 years	900	"			101.6		2 c c
	6 years	900	"			100		2 c c
	2 years	1,000	"			101		2 c c
	3 years	600	"			100		2 c c
						100		2 c c
							6 p. m.	
	5 years	1,100	Nov. 19 and 20				101½	2 c c
	2 years	1,050	"				100¾	2 c c
	5 years	1,000	"				100½	2 c c
	3 years	1,000	"				101½	2 c c
	2 years	100	"				101¼	2 c c
	1 year	250	"				103	1 c c
	2 years	950	"				101¾	2 c c
	3 years	950	"				101¼	2 c c
	2 years	650	"				101¼	2 c c
	2 years	900	"				101¾	2 c c
	2 years	900	"				101¾	2 c c
						7 p. m.	9 p. m.	
	3 years	600	Dec. 5, 6 and 7			102.6	102	1½ c c
	3 years	600	"			101.8	101	1¾ c c
	5 years	600	"			101.8	101.6	1¾ c c
	5 years	1,000	"			101.8	101.8	2 c c
	4 years	550	"			101	100.6	1¾ c c
	3½ years	800	"			101.2	101.1	2 c c
	8 years	850	"			101.8	102	2 c c
	10 years	750	"			101.5	101.2	2 c c
	8½ years	750	"			100.2	99.5	2 c c
	7 years	750	"			101.6	101.4	2 c c

is by physical examination.

Table of Tuberculin Tests, Post-

Location.	OWNER.	Breed.	Registered No.	Tag No.
Warren county:				
Bolton	Alma Farm (Theo. F. H. Meyer, manager)	Jersey	113659	210
"	"	"	41166	211
"	"	"	42339	212
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"	42053	213
"	"	"	113661	214
"	"	"		
"	"	"		
"	"	"		
"	"	"	113658	217
"	"	"	113667	218
"	"	"		
"	"	"		
"	"	"	113668	219
"	"	"	113669	223
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		
"	"	"		226
"	"	"		
"	"	"	113662	227
"	"	"	113664	228
"	"	"	44069	229
"	"	"		
"	"	"		
"	"	"		
"	"	"	113671	232
"	"	"		
"	"	"		
Wayne county:				
Marion	Wm. H. Lookup	Native		
"	"	Grade Jersey		
"	"	Native		
"	"	"		
"	"	Grade Durham		
Westchester county:				
Kitchawan	Leverett W. Baker	Grades		1961
"	"	"		1962
"	"	"		
"	"	"		1963
"	"	"		
"	"	"		1964
"	"	"		
"	"	"		1965
"	"	"		1966
"	"	"		
"	"	"		
"	"	"		
"	"	"		1967
"	"	"		
"	"	"		1968
"	"	"		1969
"	"	"		
"	"	"		
"	"	"		1970
"	"	"		
"	"	"		1971
"	"	"		
"	"	"		
"	"	"		1972
"	"	"		
"	"	"		

.ppraisals and Awards—(*Continued*).

	Weight.	Date of examination.	Temperature Before Injection.				Amount injected
			a. m.	a. m.	7 p. m.	9 p. m.	
.....	800	Dec. 5, 6 and 7	.....	.....	101	101.8	2 c c
.....	800	"	.....	.....	102.2	101.8	2 c c
.....	850	"	.....	.....	101.1	101.2	2 c c
.....	800	"	.....	.....	100	100.6	2 c c
.....	750	"	.....	.....	100.2	100	2 c c
.....	800	"	.....	.....	101.4	101	2 c c
.....	750	"	.....	.....	102	101.8	2 c c
.....	800	"	.....	.....	102.2	102.3	2 c c
.....	750	"	.....	.....	102.1	101.4	2 c c
.....	800	"	.....	.....	101.8	101	2 c c
.....	750	"	.....	.....	100.9	100.1	2 c c
.....	700	"	.....	.....	101.5	101.4	2 c c
.....	700	"	.....	.....	102	102.1	2 c c
.....	700	"	.....	.....	102.5	102	2 c c
.....	600	"	.....	.....	103.4	101.5	1¼ c c
				10 a.m.		3.30 p.m	
3.....	150	Dec. 6 and 7	.....	101	... .	102.4	½ c c
3.....	100	"	.....	102	.....	102.6	½ c c
3.....	200	"	.....	101.8	.. ....	102.8	½ c c
18.....	250	"	.....	101	.....	102	½ c c
18.....	175	"	.....	102.8	.....	102.8	½ c c
18.....	250	"	.....	102	.....	102	½ c c
5.....	150	"	.....	102.4	.....	102.9	½ c c
3.....	125	"	.....	102.3	.....	103	½ c c
3.....	150	"	.....	102.8	.....	102.8	½ c c
3.....	125	"	.....	102.5	.....	103.2	½ c c
.....	700	"	.....	102.2	.....	102.2	2 c c
.....	700	"	.....	103	.....	102.8	2 c c
.....	175	"	.....	103.2	.....	103	½ c c
.....	550	"	.....	101.8	.....	102	1½ c c
.....	500	"	.....	101	....	102	1½ c c
.....	450	"	.....	102	.....	102	1¼ c c
.....	400	"	.....	102	.....	102.2	1 c c
.....	400	"	.....	101.5	.....	102	1 c c
.....	400	"	.....	102	.....	102.8	1 c c
					4 p. m.	6 p. m.	
.....	1,100	Dec. 12 and 13	.....	.....	101.5	101.8	1 c c
.....	850	"	.....	.....	102.8	102 8	1 c c
.. ....	1,200	"	.....	.....	103	103	1 c c
.....	1,100	"	.....	.....	102.1	102.7	1 c c
.....	1,000	"	.....	.....	101.5	102	1 c c
						1 p m.	
.....	1,200	Aug. 1 and 2	.....	.....	.....	102½	2 c c
.....	1,100	"	.....	.....	.....	102¾	2 c c
.....	900	"	.....	.....	.....	104½	2 c c
.....	900	"	.....	.....	.....	103¼	2 c c
.....	1,000	"	.....	.....	.....	103½	2 c c
.....	950	"	.....	.....	.....	102½	2 c c
.....	850	"	.....	.....	.....	102½	2 c c
.....	900	"	.....	.....	.....	102¾	2 c c
.....	900	"	.....	.....	.....	102¾	2 c c
.....	1,050	"	.....	.....	.....	102	2 c c
.....	1,100	"	.....	.....	.....	103	2 c c
.....	950	"	.....	....	.....	103	2 c c
.....	950	"	.....	.....	.....	103	2 c c
.....	1,000	"	.....	.....	.....	103½	2 c c
.....	1,200	"	.....	.....	.....	103	2 c c
.....	900	"	.....	.....	.....	102¾	2 c c
.....	850	"	.....	.....	.....	102	2 c c
.....	1,000	"	.....	.....	.....	103¼	2 c c
.....	800	"	.....	.....	.....	102½	2 c c
.....	1,000	"	.....	.....	.....	102½	2 c c
.....	900	"	.....	.....	.....	105	2 c c
.....	1,000	"	.....	.....	.....	102¼	2 c c
.....	1,000	"	.....	.....	.....	102	2 c c
.....	900	"	.....	.....	.....	102½	2 c c
.....	1,000	"	.....	.....	.....	103	2 c c
.....	900	"	.....	.....	.....	102½	2 c c

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Broome county:										
Levi P. Roe	101.7	101.4	102.1	101.6	101.8	102	.....	.....	.....	.....
"	104	106.3	107	106.8	106.9	106.4	.....	.....	$40 00	.....
"	100.7	100.7	101.3	101	101.2	101.4	.....	.....	.....	.....
"	101	101.5	102.5	102.2	102.3	102.4	.....	.....	.....	.....
"	101	101.2	101.7	101.8	101.5	101.7	.....	.....	.....	.....
"	102.1	104.6	106.2	106.8	106.2	105	.....	.....	35 00	.....
"	101	101.4	102.1	103	104.2	104.1	104.2	103.8	55 00	.....
"	100.9	101.4	104.5	106.2	106.2	105.5	.....	.....	45 00	.....
"	102	104.2	105.5	105.6	106	105.1	.....	.....	50 00	.....
"	101	101.4	102.1	102	102.4	102.6	.....	.....	.....	.....
"	103.5	103.8	104.2	104.8	105.3	105	.....	.....	38 00	.....
"	101.2	103.8	105.5	105.4	105.3	104.2	.....	.....	.....	.....
"	100.8	101.3	101.6	101.2	102	102.4	.....	.....	.....	.....
"	101.3	103.9	105.4	105.7	106.4	106.4	.....	.....	50 00	.....
"	103.3	105.8	106.5	106	106	105.6	.....	.....	50 00	.....
"	100.7	102.5	105.5	105	105	105	.....	.....	45 00	.....
"	101	101.3	104	106.4	106.8	106.6	.....	.....	50 00	.....
"	100.6	101	101.1	101.1	101.3	101.4	.....	.....	.....	.....
"	107	106.2	104.6	104.4	104.6	104.8	.....	.....	38 00	.....
"	101.6	104	105.2	104.2	104.1	103.4	.....	.....	42 00	.....
"	102.5	103.8	105.2	105.4	106.2	107	.....	.....	36 00	.....
"	101.9	104.3	106.4	105.5	105.8	105.6	.....	.....	50 00	.....
"	100.6	101	102	101.4	101.6	102	.....	.....	.....	.....
"	101	101.6	102	101.4	102	102.2	.....	.....	.....	.....
"	101.6	101	101.4	101	101.7	102	.....	.....	.....	.....
"	103	100.8	101	101	101	101.5	.....	.....	.....	.....
"	103	104.5	106	106.1	106	105.4	.....	.....	50 00	.....
"	101.2	101.8	103.2	105.4	104.9	105	.....	.....	50 00	.....
"	101	101.2	101.2	101.7	102.1	102.2	.....	.....	.....	.....
"	101.8	102	102.4	102.5	103.5	104.2	105	.....	50 00	.....
"	101	101	101.2	101.8	104	104	104.1	.....	50 00	.....
"	102.2	101.8	101.8	102.3	103.3	105	106	.....	35.00	.....
"	102.3	102	102.4	104.5	105.2	105.6	.....	.....	30 00	.....
"	102.1	104.3	104.4	104.7	105.4	106	.....	.....	60 00	.....
"	101	101.2	102.2	104.3	105	105.1	.....	.....	30 00	.....
"	101	101	101	101.1	101.5	102.1	.....	.....	.....	.....
"	100.6	100.7	101	101.2	101.2	101.8	.....	.....	.....	Total award $497 00
	5.30	7.30	9.30	11.30	2.30					
	a. m.	a. m.	a. m.	a. m.	p. m.					
W. A. Vinning	101.2	100.6	101.6	101	100.6	.....	.....	.....	.....	.....
"	101	100	101.2	101.2	101	.....	.....	.....	.....	.....
"	101	101	101	101	101	.....	.....	.....	.....	.....
"	101.4	101.6	101.6	101	101	.....	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Fairly good..	F. S. Kilborne.....	Healthy.
" ..	"	Killed Sept. 12, '95 ; several foci in mediastinal gland and one in right retropharyngeal.
" ..	"	Healthy.
" ..	"	Healthy.
" ..	"	Healthy.
" ..	"	Killed Sept. 12, '95 ; general tuberculosis, mainly in small deposits in lungs, liver, glands and on pleura.
" ..	"	Killed Sept. 12, '95 ; few foci in two mediastinal and one bronchial gland.
" ..	"	Killed Sept. 12, '95 ; mediastinal glands greatly enlarged and no other lesions found
" ..	"	Killed Sept. 12, '95 ; tuberculosis—size hen's egg in conch, lobe right lung only.
" ..	"	Healthy.
" ..	"	Killed Sept. 12, '95 ; general tuberculosis of both lungs, liver and glands.
" ..	"	Killed Sept. 12, '95 ; several foci in mediastinal glands only.
" ..	"	Healthy.
" ..	"	Killed Sept. 12, '95 ; extensive tuberculosis in mediastinal and bronchial glands.
" ..	"	Killed Sept. 12, '95 ; few foci in mediastinal and bronchial glands only.
" ..	"	Killed Sept. 12, '95 ; half of right ventral lobe, bronchial and mediastinal glands
" ..	"	Killed Sept. 12, '95 ; bronchial and mediastinal glands only.
" ..	"	Healthy
" ..	"	Killed Sept. 12, '95 ; extensive in bronchial and mediastinal glands.
" ..	"	Killed Sept. 12, '95 ; general tuberculosis, lungs and glands.
" ..	"	Killed Sept. 12, '95 ; several foci in mediastinal and bronchial glands, and one center in right caudal lobe.
" ..	"	Killed Sept. 12, '95 ; numerous foci in mediastinal and bronchial glands, and two centers 1 in. in diam. in ventral lobe, right lobe.
" ..	"	Healthy.
" ..	"	Healthy.
" ..	"	Healthy.
" ..	"	Healthy.
" ..	"	Killed Sept. 12, '95 ; extensive deposits in mediastinal glands and one center ½ in. diam. in ventral lobe right lung.
" ..	"	Killed Sept. 12, '95 ; left retropharyngeal gland only, with 10 to 12 small foci.
" ..	"	Healthy.
" ..	"	Killed Sept. 12, '95; one foci each in one mediastinal and one bronchial gland.
" ..	"	Killed Sep. 12, '95 ; several foci in mediastinal and bronchial glands
" ..	"	Killed Sept. 12, '95; extensive in bronchial and mediastinal glands; center size of egg each in caudal and ventral lobe right lung.
" ..	"	Killed Sept. 12, '95 ; half dozen foci in one bronchial and one mediastinal gland.
" ..	"	Killed Sept. 12, '95; extensive deposits in retropharyngeal, bronchial, mediastinal and mesenteric gland
" ..	"	Killed Sept. 12, '95; extensive in mediastinal and bronchial glands
" ..	"	Healthy
" ..	"	Healthy
.....	M. J. Henderson	
.....	"	
.....	"	
.....	"	

Table of Tuberculin Tests, 1

OWNER.	TEMPERATURE AFTER INJECTION.								Appraisement.
	5.30 a. m.	7.30 a. m.	9.30 a. m.	11.30 a. m.	2.30 p. m.	4 p. m.	6 p. m.	8 p. m.	
Broome county:									
W. A. Vinning	102	102	102.2	101.6	101.4	.....	.....	.....	.....
"	99	101	101.2	100.4	101.2	.....	.....	.....	.....
"	101	101.4	101.2	100.6	101	.....	.....	.....	.....
	5	7	9	11	2				
	a. m.	a. m.	a. m.	a. m.	p. m.				
C. E. Fuller	101.4	101.2	101	100.6	100.4	.....	.....	.....	.....
"	100	101	101.4	101.6	101.4	.....	.....	.....	.....
"	100	101	101	101.4	101.4	.....	.....	.....	.....
"	101	101	101	101.2	101.2	.....	.....	.....	.....
"	100	100	100.8	100.8	101	.....	.....	.....	.....
"	100.2	100.2	101	100	100.6	.....	.....	.....	.....
"	99	101	101.2	101	101	.....	.....	.....	.....
"	100.4	101	101	101	101	.....	.....	.....	.....
"	99	101	99	100.6	100.6	.....	.....	.....	.....
"	100	101.4	101	101	101	.....	.....	.....	.....
"	99	100.4	100	100	100.6	.....	.....	.....	.....
"	100	101	101	101	100	.....	.....	.....	.....
"	100.6	101	101	101.4	101	.....	.....	.....	.....
"	100.6	100	101.4	101.4	101	.....	.....	.....	.....
"	99	101	100.2	100.6	101	.....	.....	.....	.....
"	100.4	100.6	101.2	101	101	.....	.....	.....	.....
	6	8	10		2				
	a. m.	a. m.	a. m.	12 m.	p. m.				
Binghamton State Hospital	102	102	102	101.8	101.8	.....	.....	.....	.....
"	101.8	101	101	101.4	101	.....	.....	.....	.....
"	102	101.8	101.8	101.4	101.6	.....	.....	.....	.....
"	102	102	101.6	101.8	101.4	.....	.....	.....	.....
"	106	106	106	106.4	106	.....	.....	.....	$45 00
"	102	101	100.6	100.8	100.4	.....	.....	.....	.....
"	102	101.8	101.8	101.4	101	.....	.....	.....	.....
"	101.8	102	102	102	101.8	.....	.....	.....	.....
"	102	102	102	102	101.6	.....	.....	.....	.....
"	102.2	101 8	102	101.6	101.6	.....	.....	.....	.....
"	106	106.4	106	106	105.6	.....	.....	.....	50 00
"	103	102	101.6	101.4	101	.....	.....	.....	.....
"	102	102	101.8	101.8	101.6	.....	.....	.....	.....
"	102	102.8	102	101.8	102	.....	.....	.....	.....
"	101.2	101.8	101.8	101.8	101.6	.....	.....	.....	.....
"	101.8	102	101.6	101.6	101.6	.....	.....	.....	.....
"	101	101	101	101	101	.....	.....	.....	.....
"	105	104	102	101.8	101.6	.....	.....	.....	.....
"	102	101	101	101	101	.....	.....	.....	.....
"	101	101.2	100.6	101	101	.....	.....	.....	.....
"	101	101	101	101.4	104	.....	.....	.....	.....
"	101.2	101	100.4	100.8	101	.....	.....	.....	.....
"	101.4	101.8	101.4	101	104	.....	.....	.....	.....
"	101 8	102	102	101.8	102	.....	.....	.....	.....
"	101	100.6	100	100	100	.....	.....	.....	.....
"	02	102	102	102	101.2	.....	.....	.....	.....
"	101.4	101	101.4	101.6	101.4	.....	.....	.....	.....
"	102	101.6	101	101.6	101	.....	.....	.....	.....
"	102	101.8	102	101.6	102	.....	.....	.....	.....
"	101.8	101.4	101.4	101.8	101.6	.....	.....	.....	.....
"	102.6	101.4	102	101.6	102	.....	.....	.....	.....
"	101.6	101.8	101.6	101	101.6	.....	.....	.....	.....
"	102	102	101	102	101.6	.....	.....	.....	.....
"	106	106.4	107	106	105	.....	.....	.....	90 00
"	102	102	102	102.6	101.8	.....	.....	.....	.....
"	102	101.8	102	101.6	101.8	.....	.....	.....	.....
"	101	102	101.6	101.4	101.8	.....	.....	.....	.....
"	101.4	102.2	102	101.6	102	.....	.....	.....	.....
"	101.4	101.8	101.6	101.4	101.6	.....	.....	.....	.....
"	101	102	101.6	101.8	101.4	.....	.....	.....	.....
"	102	101	101	101	101.4	.....	.....	.....	.....
"	102	106	106	106	106.2	.....	.....	.....	150 00
"	102	101.4	101.4	101.6	101.4	.....	.....	.....	.....
"	102	103	105	105	104.6	.....	.....	.....	25 00
	7	9	10	11	1				
	a. m.	a. m.	a. m.	a. m.	p. m.				
"	102.8	105	106	106	105.4	.....	.....	.....	29 00
"	102	106.4	107	107	106	.....	.....	.....	40 00

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.— Location of Lesions.
	F. S. Kilborne	
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	M. J. Henderson, V. S.	
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	"	
	M. J. Henderson, V. S.	
	"	
	"	
	"	
	"	Pulmonary, hepatic, mammæ and mesenteries.
	"	
	"	
	"	
	"	
	"	
	"	Mediastinal and pulmonary.
	"	
	"	
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	"	
	"	
	"	
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	"	
	"	Mediastinal, mesenteric, pleura and omentum.
	"	
	"	
	"	
	"	
	"	
	"	
	"	
	"	Pulmonary, mediastinal.
	"	
	"	Pulmonary, mediastinal and mammæ.
	"	Retropharyngeal and mediastinal.
	"	Pulmonary and mediastinal.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	7 a. m.	9 a. m.	10 a. m.	11 a. m.	1 p. m.	4 p. m.	6 p. m.	8 p. m.		
Broome county:										
Binghamton State Hospital	102.6	106	106.6	106.6	105	.....	.....	.....	$30 00	.....
"	102.4	107	107	106	105.6	.....	.....	.....	32 00	.....
"	102.2	106	106	105	105.2	.....	.....	.....	27 00	.....
"	102	101.8	102	102.6	101.8	.....	.....	.....	.....	.....
"	102	106	106.6	106.2	106	.....	.....	.....	35 00	.....
"	101	103	102	102	102	.....	.....	.....	.....	.....
"	102	107	107	106	106	.....	.....	.....	35 00	.....
"	102	103	105	101	101	.....	.....	.....	.....	.....
"	101.6	103	105	101	105	.....	.....	.....	30 00	.....
"	106	105	105	105	104.6	.....	.....	.....	35 00	.....
"	101	102	102	102	102	.....	.....	.....	.....	.....
"	102	106	106.2	106.4	106	.....	.....	.....	22 00	.....
"	101.8	106	106	106	106	.....	.....	.....	25 00	.....
"	102	105	106	106	105	.....	.....	.....	22 00	.....
"	102	104	102.2	102.4	102	.....	.....	.....	.....	.....
"	102	104	103	102	102	.....	.....	.....	.....	.....
"	102	105	105	106	105	.....	.....	.....	23 00	.....
"	101	101	101	101	101	.....	.....	.....	.....	.....
"	101.8	107	107	106.6	106	.....	.....	.....	40 00	.....
"	101.6	102	102	105	105	.....	.....	.....	28 00	.....
"	103	106.4	106	106	105	.....	.....	.....	40 00	.....
"	101	101	101	101	101	.....	.....	.....	.....	.....
"	101.6	102	101.8	101	101	.....	.....	.....	.....	.....
"	106.6	107	107	107	105	.....	.....	.....	33 00	.....
"	107	107	106	103.6	103	.....	.....	.....	33 00	.....
"	102	106	105	105.2	105	.....	.....	.....	25 00	.....
"	102	102	101.8	101.6	102	.....	.....	.....	.....	.....
"	102	107.4	105.8	105	105	.....	.....	.....	27 00	.....
"	102	102	102.6	101.8	101.8	.....	.....	.....	.....	.....
"	102.2	101	101	101	101.4	.....	.....	.....	.....	.....
"	102.6	105	105	106	105	.....	.....	.....	42 00	.....
"	102.6	102	104.2	105	105.2	.....	.....	.....	30 00	.....
"	102	102	102	102	102	.....	.....	.....	.....	.....
"	102.4	106.2	106.4	107	106	.....	.....	.....	35 00	.....
"	101.2	101	101.6	101.4	101.4	.....	.....	.....	.....	.....
"	102	107	107	107.2	106.4	.....	.....	.....	38 00	.....
"	102.4	107	107	107	106	.....	.....	.....	36 00	.....
"	103	106.6	106.8	107	107.2	.....	.....	.....	36 00	.....
"	102	106.6	107	107	106.4	.....	.....	.....	30 00	.....
"	102	101.2	102	101	101	.....	.....	.....	.....	.....
"	106.6	107.6	107.4	106	106.4	.....	.....	.....	31 00	.....
"	101.4	101	101	101	101	.....	.....	.....	.....	.....
"	101	101	101	101	101	.....	.....	.....	.....	.....
"	102	101.6	101	101.2	101	.....	.....	.....	.....	.....
"	102	102	105	106	105	.....	.....	.....	35 00	.....
"	106.4	106	106	106	106	.....	.....	.....	23 00	.....
"	102	105.2	105	105	105	.....	.....	.....	25 00	.....
										Total award, $605 50
"	106 6 a. m.	106 8 a. m.	106 10 a. m.	105.2 12 m.	105.4 2 p. m.	.....	.....	.....	20 00	
A. D. Wales	102	102	101.8	102	101.6	.....	.....	.....	.....	.....
"	101	101	101.6	102	101.8	.....	.....	.....	.....	.....
"	104.4	106	106	106	105.6	.....	.....	.....	35 00	17 50
"	102	102	101.6	101.8	101.8	.....	.....	.....	.....	.....
"	102	102	101.8	101.8	101.6	.....	.....	.....	.....	.....
"	102	101.8	102	102	101.8	.....	.....	.....	.....	.....
"	104	102	104	105	104.6	.....	.....	.....	30 00	15 00
"	105	106	106	105	104.6	.....	.....	.....	30 00	15 00
"	102	100.6	101	101	101.4	.....	.....	.....	.....	.....
"	102	102	104	104	103.4	.....	.....	.....	25 00	12 50
"	101.6	102.6	101.8	101.6	101.6	.....	.....	.....	.....	.....
"	101	102	101.6	101.4	101.6	.....	.....	.....	.....	.....
"	101	102	101.4	101.6	101.8	.....	.....	.....	.....	.....
"	102	101	101	101	101.4	.....	.....	.....	.....	.....
"	102	102	102	101.8	101.8	.....	.....	.....	.....	.....
"	103	102	102	102	102	.....	.....	.....	.....	.....
"	102	102	102	102	102	.....	.....	.....	.....	.....
"	101.8	101	101	101.8	101.4	.....	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	W. J. Henderson, V.S.	Pulmonary.
.....	"	Pulmonary.
.....	"	Mediastinal and **pulmonary.**
.....	"	.....
.....	"	Retropharyngeal and **pulmonary.**
.....	"	.....
.....	"	Pulmonary.
.....	"	.....
.....	"	Pulmonary and retropharyngeal.
.....	"	Pulmonary, omentum, plural mesenteric.
.....	"	.....
.....	"	Mediastinal and pulmonary.
.....	"	Mediastinal and pulmonary.
.....	"	Pulmonary, mesenteric and **mediastinal.**
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal and **mediastinal**
.....	"	.....
.....	"	Pulmonary and **mediastinal.**
.....	"	Pulmonary.
.....	"	Pulmonary and **mediastinal.**
.....	"	.....
.....	"	.....
.....	"	**Retropharyngeal and hepatic.**
.....	"	**Pulmonary and retropharyngeal.**
.....	"	**Pulmonary and mediastinal.**
.....	"	.....
.....	"	Mediastinal and **mesenteric.**
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal.
.....	"	Pulmonary.
.....	"	.....
.....	"	**Mediastinal, omentum and mammæ.**
.....	"	.....
.....	"	Retropharyngeal and **mediastinal.**
.....	"	Pulmonary.
.....	"	Prescapular, inguinal **and mediastinal.**
.....	"	Diaphragmatic, pleural **and mediastinal.**
.....	"	.....
.....	"	Pulmonary, mediastinal.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	**Pulmonary**, pleural, mediastinal.
.....	"	**Inguinal**, pulmonary, retropharyngeal.
.....	"	**Pericardium**, pleura, omentum.
.....	"	**Pulmonary, mediastinal and hepatic.**
.....	"	.....
.....	"	.....
.....	"	**Mediastinal, pulmonary, retropharyngeal.**
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	**Mammæ and pulmonary.**
.....	"	**Mesenteric and mediastinal.**
.....	"	.....
.....	"	**Pulmonary and mediastinal.**
.....	"	.....
.....	"	.....
.....	"	.....
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Broome county :										
Alvin Devereux	100	101.4	101.6	101.6	.....	.....	.....	.....	.....	.....
"	101.8	101.6	102	101	.....	.....	.....	.....	.....	.....
"	102	101.6	101.6	101	.....	.....	.....	.....	.....	.....
"	102	102	102	102	.....	.....	.....	.....	.....	.....
"	101	102	102.2	102.6	.....	.....	.....	.....	.....	.....
"	103.2	104	104	101	.....	.....	.....	.....	$35 00	$17 50
"	101.8	101	100.8	101	.....	.....	.....	.....	.....	.....
"	102.4	102.4	102.4	102	.....	.....	.....	.....	.....	.....
"	106	107	105.4	105.6	.....	.....	.....	.....	28 00	14 00
"	103	103.2	105	105	.....	.....	.....	.....	35 00	17 50
"	102	101.8	102	101.8	.....	.....	.....	.....	.....	.....
"	101.6	101.8	101.8	101.6	.....	.....	.....	.....	.....	.....
"	103.4	105.2	105	105	.....	.....	.....	.....	30 00	15 00
"	102.6	102.4	103	103	.....	.....	.....	.....	40 00	20 00
"	101	101	101	101	.....	.....	.....	.....	.....	.....
"	104	105.4	105	105	.....	.....	.....	.....	28 00	14 00
"	106.4	106	104	104	.....	.....	.....	.....	33 00	16 00
"	104	105	105.2	105.2	.....	.....	.....	.....	35 00	17 50
"	103.6	104.4	105	105	.....	.....	.....	.....	35 00	17 50
"	101	101.8	101.6	101	.....	.....	.....	.....	.....	.....
"	101.8	101.2	102.6	104	.....	.....	.....	.....	40 00	20 00
"	102	102	103	104.6	.....	.....	.....	.....	25 00	12 50
"	102	102	103.6	101	.....	.....	.....	.....	52 00	25 00
"	101	101	101.6	101.6	.....	.....	.....	.....	.....	.....
"	101.4	101.4	102	102.6	.....	.....	.....	.....	.....	.....
"	103	105	105	105	.....	.....	.....	.....	45 00	22 50
"	104	105	105	105	.....	.....	.....	.....	28 00	14 00
"	101	102	103	105	.....	.....	.....	.....	35 00	17 50
"	102	102.2	103	103	.....	.....	.....	.....	30 00	15 00
"	102	103	103	103.6	.....	.....	.....	.....	32 00	16 00
"	103	103.2	105	105	.....	.....	.....	.....	40 00	20 00
"	102	103	103	103.6	.....	.....	.....	.....	40 00	20 00
"	105	105	105	105	.....	.....	.....	.....	30 00	15 00
"	103	103	106	106	.....	.....	.....	.....	20 00	10 00
"	101	102.8	104.6	104.6	.....	.....	.....	.....	35 00	17 50
"	100	102	102.6	101.6	.....	.....	.....	.....	.....	.....
"	107	107	106.6	106.6	.....	.....	.....	.....	25 00	12 50
"	102	101.6	104	104	.....	.....	.....	.....	50 00	25 00
"	102.4	104	104	104	.....	.....	.....	.....	28 00	14 00
"	104	105.2	105.6	105.6	.....	.....	.....	.....	35 00	17 50
"	101	102	101.6	101.6	.....	.....	.....	.....	.....	.....
"	103.4	104	104	104	.....	.....	.....	.....	35 00	17 50
"	106	106.8	106.6	106.6	.....	.....	.....	.....	35 00	17 50
"	102.4	104.6	105	105	.....	.....	.....	.....	32 00	16 00
"	105	106	106.8	106.8	.....	.....	.....	.....	45 00	22 50
"	102.6	103	103	104	.....	.....	.....	.....	35 00	17 50
"	101	102	104.6	101.6	.....	.....	.....	.....	35 00	17 50
"	101.6	102.8	103.6	104.6	.....	.....	.....	.....	30 00	15 00
"	105	105	105.2	105.2	.....	.....	.....	.....	30 00	15 00
"	106	106	105	105	.....	.....	.....	.....	35 00	17 50
"	106	107	106.4	106.4	.....	.....	.....	.....	45 00	22 50
"	105	106.6	107	107	.....	.....	.....	.....	28 00	14 00
"	104.4	106	107 6	107.6	.....	.....	.....	.....	45 00	22 50
"	106	101.6	107.6	107.6	.....	.....	.....	.....	30 00	15 00
"	101	101.8	101 8	101.8	.....	.....	.....	.....	.....	.....
"	104	106	106	106	.....	.....	.....	.....	40 00	20 00
"	103	104.6	105	105	.....	.....	.....	.....	40 00	20 00
"	105	105.4	105.4	106	.....	.....	.....	.....	30 00	15 00
"	101	101.6	100.6	101	.....	.....	.....	.....	.....	.....
"	101	101.6	101.6	101	.....	.....	.....	.....	.....	.....
"	101	101.4	101.2	101	.....	.....	.....	.....	.....	.....
"	101.8	104.2	105	105	.....	.....	.....	.....	28 00	14 00
"	104	105.2	105	105	.....	.....	.....	.....	28 00	14 00
"	104	105.6	105	105	.....	.....	.....	.....	32 00	16 00
"	102.6	103	103	102	.....	.....	.....	.....	28 00	14 00
"	102	103.2	103.8	104	.....	.....	.....	.....	32 00	16 00
"	102	102.6	102.4	102	.....	.....	.....	.....	.....	.....
"	101	102.6	102.4	101	.....	.....	.....	.....	.....	.....
"	101	101.8	105	105	.....	.....	.....	.....	28 00	14 00
"	104	106	107	107	.....	.....	.....	.....	25 00	12 50

tems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	M. J. Henderson, V. S.	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mediastinal and mesenteric glands.
.....	"	.....
.....	"	.....
.....	"	Pulmonary.
.....	"	Hepatic and omentum.
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal and mediastinal.
.....	"	Mediastinal.
.....	"	.....
.....	"	Hepatic.
.....	"	Mediastinal and mesenteric.
.....	"	Pulmonary.
.....	"	Mediastinal, mesenteric.
.....	"	.....
.....	"	Pulmonary.
.....	"	Retropharyngeal and mediastinal.
.....	"	Mesenteric and mammæ.
.....	"	.....
.....	"	.....
.....	"	Hepatic and mesenteric.
.....	"	Mediastinal.
.....	"	Retropharyngeal.
.....	"	Pulmonary.
.....	"	Pulmonary.
.....	"	Retropharyngeal.
.....	"	Retropharyngeal, mesenteric and mediastinal.
.....	"	Inguinal mammæ.
.....	"	Intestinal.
.....	"	Pulmonary, pleura, omentum and inguinal.
.....	"	.....
.....	"	Pulmonary, hepatic and omentum.
.....	"	Retropharyngeal, mediastinal and pulmonary.
.....	"	Hepatic, mediastinal and mammæ.
.....	"	Retropharyngeal, pulmonary and mediastinal.
.....	"	.....
.....	"	Pulmonary, cardiac and retropharyngeal.
.....	"	Retropharyngeal and hepatic.
.....	"	Hepatic and intestinal.
.....	"	Mediastinal
.....	"	Mediastinal and pulmonary.
.....	"	Hepatic, diaphragmatic and omentum.
.....	"	Mediastinal and mammæ.
.....	"	Pleura.
.....	"	Hepatic.
.....	"	Omentum.
.....	"	Heptic and diaphragmatic.
.....	"	Retropharyngeal and subcutaneous.
.....	"	Pulmonary, pleura, mediastinal, omentum.
.....	"	.....
.....	"	Mediastinal and mesenteric glands.
.....	"	Pulmonary and retropharyngeal.
.....	"	Intestinal, hepatic and omentum, pleura, pulmonary, retropharyngeal.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mediastinal and pulmonary.
.....	"	Pulmonary.
.....	"	Pulmonary.
.....	"	Mediastinal and mesenteric glands.
.....	"	Retropharyngeal and mammæ.
.....	"	.....
.....	"	.....
.....	"	Mesenteric.
.....	"	Retropharyngeal and mediastinal.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m	4 p. m.	6 p. m.	8 p. m.		
Broome county:										
Alvin Devereux	101.8	101.2	101.8	101.8	102					
"	101.6	101.4	102	101.8	102					
"	102	102	102	101.4	101.4					
"	101.8	102	102	102	102					
"	101.2	101.8	101	101	102					
"	102	102	102	102	101.8					
"	102	102	102	102	102					
"	101.8	102	102	102	102					
"	102	102	102	102	101.6					
"	102	102	102	102	101.6					
"	101	101.8	101	101	101.8					
"	102	102	102	103.6	102.6					
"	102	103.4	104	104	104				$30 00	$15 00
"	102	105	105	105	104.6				28 00	14 00
"	103	103	103	103	102.6				28 00	14 00
"	105.4	106	104	104	104				40 00	20 00
"	105	106.6	106	106	105				40 00	20 00
"	102	101.6	101.8	103	101.4					
"	106.4	107	107	106.6	106				40 00	20 00
Cattaraugus county:										
Geo. B. Forman	105	105.6	106	106	106				100 00	50 00
"	102.6	104	104	104.6	104.8				120 00	60 00
"	104	105	106	106	105				100 00	50 00
"	102	101	101	101	101.4					
"	101.6	101.4	101	101.4	101.2					
"	104.2	105	106	106	106.4				75 00	37 50
"	101	102	101.4	101	101.4					
"	101.4	101	101.2	101	101.4					
"	101	101.4	101	101	101.4					
"	101.6	101	101.4	101	101.2					
"	101	101	101.4	101.2	101					
"	101.6	101.4	101.6	101.4	101.6					
"	101.2	101	101.4	101	101.4					
"	101	101.4	101	101.2	101					
"	101	102	101.4	101.4	101.6					
"	101.6	102	101.4	101.2	101					
"	101	101.4	101.2	101	101					
"	100	100.6	101	101	101					
	6 a. m.	8 a. m.	10 a. m.	12 m	2 p. m.	4 p. m.				
Chemung county:										
Harvey Turner	100	100.6	101.6	101.1	101.1					
"	102	101	101.8	101.8	101.6					
"	101.2	101	101	100.8	101					
"	102	102	100.6	100	100					
"	101.8	100	100	100.6	100.4					
"	101.4	100	101.8	101	101					
"	102	102	102	102	101.6					
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Chenango county:										
T. A. Southworth	101	102	102	101½	101	101				
"	102	102½	102½	102	101½	101				
"	101¾	102½	102¼	102	102	101½				
"	103	104	104½	104	103½	103			32 00	16 00
"	101½	102	102½	102½	102	101¾				
"	101¾	104	104	104¼	103¾	103½			42 00	21 00
"	102	102¼	102½	102	101½	101				
"	103	104	104¾	103½	103	102¾			40 00	20 00
"	101½	102	102	102¼	102	101½				
"	101½	102	101½	101	101¼	101				
"	102	102½	102	101½	101	101				
"	101½	102½	102¾	102	101½	101¼				
"	102	103	102½	102	101¾	101½				
"	102¾	104	104¼	104	103¼	102½			15 00	7 50
Curtis S. Mouray	101	101½	101½	101½						
"	102	102	102	102						
"	101½	101¾	101¾	101¾						

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
	M. J. Henderson, V. S.	
	"	
	"	
	"	
	"	
	"	
	"	
	"	
	"	
	"	
	"	
	"	Pulmonary, mediastinal and mammæ.
	"	Retropharyngeal and mediastinal and pulmonary.
	"	Retropharyngeal and mesenteric.
	"	Mediastinal.
	"	Pulmonary and hepatic.
	"	
	"	Retropharyngeal and pulmonary.
	"	Pulmonary, mediastinal and mesenteric.
	"	Mediastinal, retropharyngeal and mesenteric.
	"	Retropharyngeal and mammæ.
	"	
	"	
	"	Mediastinal.
	"	
	"	
	"	
	"	
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	"	
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	"	
	"	
	"	
	"	
	"	
	R. D. Austin, V. S.	
	"	
	"	Posterior and anterior mediastinal, small intestines, mammæ.
	"	
	"	Posterior and anterior mediastinal, small intestines and liver.
	"	
	"	Small intestines mediastinal and mammæ.
	"	
	"	
	"	
	"	
	"	
	"	Mediastinal, spleen, liver and small intestines.
	"	
	"	
	"	

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Chenango county:										
Curtis S. Mouray	102	101⅘	101⅘	102	.....	.....	.....	.....	.....	.....
"	101½	100⅘	101¼	101¾	.....	.....	.....	.....	.....	.....
"	102	101½	102	102	.....	.....	.....	.....	.....	.....
"	102	102	102	101½	.....	.....	.....	.....	.....	.....
"	102¼	102	101¾	101¾	.....	.....	.....	.....	.....	.....
"	102	101¾	101½	101¼	.....	.....	.....	.....	.....	.....
"	102	101¾	101⅘	101⅘	.....	.....	.....	.....	.....	.....
"	102⅘	102	101½	101¼	.....	.....	.....	.....	.....	.....
"	101½	101	101	101	.....	.....	.....	.....	.....	.....
"	103	103	103	102⅘	.....	.....	.....	.....	.....	.....
"	101⅘	101½	101⅘	101⅘	.....	.....	.....	.....	.....	.....
"	103¼	102⅘	102	101½	.....	.....	.....	.....	.....	.....
"	103¼	103¼	103	102⅘	.....	.....	.....	.....	.....	.....
"	102	102	102	102	.....	.....	.....	.....	.....	.....
"	102	102¼	101⅘	101¼	.....	.....	.....	.....	.....	.....
"	101⅘	102	101⅘	101⅘	.....	.....	.....	.....	.....	.....
"	102	101	101½	102	.....	.....	.....	.....	.....	.....
"	101⅘	102⅘	101½	101	.....	.....	.....	.....	.....	.....
"	102	102½	102	102	.....	.....	.....	.....	.....	.....
"	102	102	102⅘	102	.....	.....	.....	.....	.....	.....
	4 a. m.	6 a. m.	8 a. m.	10 a. m.	1 p. m.	3 p. m.	5 p. m.			
Cortland county:										
Milford C. Bean	102	102	102.8	103	105	105	105	.....	$33 00	$16 50
					12 m.	2 p. m.				
Virgil.										
John Jewell	102.2	102.4	102	102	102	101.8	.....	.....	.....	.....
"	102	102	102	101.8	101.4	101.4	.....	.....	.....	.....
"	101.6	101.8	101.4	101.4	101.8	100	.....	.....	.....	.....
"	102.2	102.2	102	102	101.8	102	.....	.....	.....	.....
"	101.2	103	103	103.4	104	105	.....	.....	35 00	17 50
"	102	102	101.8	102	101.4	101	.....	.....	.....	.....
"	102.8	102.4	102.4	102.2	102	102	.....	.....	.....	.....
"	101.2	101.8	101.2	102	101	101	.....	.....	.....	.....
Franklin	102.8	103	103.8	103.2	103	102.4	.....	.....	.....	.....
	6 a. m.	8 a. m.	10 a. m.							
Delaware county:										
Edwin Taylor	102.5	105	105.5	.....	104	.....	.....	.....	20 00	10 00
"	102.2	102.4	104	106	106.7	.....	.....	.....	22 00	11 00
"	103.9	105.7	106	.....	105.5	.....	.....	.....	18 00	9 00
"	102.7	104	105	.....	106	.....	.....	.....	28 00	14 00
"	101.6	101.4	101.2	.....	101.3	.....	.....	.....	.....	.....
"	103.2	104.8	106.2	.....	105.5	.....	.....	.....	28 00	14 00
"	102	102.4	104	104.8	105	.....	.....	.....	20 00	10 00
"	103	105	106.4	.....	106.2	.....	.....	.....	20 00	10 00
"	104.3	106.4	106	.....	105.4	.....	.....	.....	19 00	9 50
"	102.2	103.2	105.2	.....	106	.....	.....	.....	25 00	12 50
"	103.4	107	106.5	.....	105.3	.....	.....	.....	23 00	11 50
"	102.2	102.2	102.3	.....	102.7	.....	.....	.....	.....	.....
"	102.2	102.8	103.9	104.9	106	.....	.....	.....	22 00	11 00
"	102.3	103.2	104.5	103.7	103.7	.....	.....	.....	18 00	9 00
"	103.7	105	106	.....	106	.....	.....	.....	15 00	7 50

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	R. D. Austin, V. S....	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	" ...	.....
.....	"	.....
.....	" ...	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	M. J. Henderson.....	Retropharyngeal, mediastinal, pulmonary and mesenteric.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal and pulmonary.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Fair	F. L. Kilborne, V. S..	One mediastinal gland, 2 foci, ¼ in., one focus ¾ in. on omentiem, one udder gland enlarged 2 diam. and soft, caseous on section.
"	" ..	Thoracic glands generally, 3-4 centers ⅛-1 in. diam. in caudal lobe each lung.
"	" ..	Both retropharyngeal and thoracic gland generally; lungs.
"	" ..	General thoracic glands and pulmonary tuberculosis; also few foci ¼ in. in diam.
"	" ..	.....
"	" ..	One retropharyngeal and caudal posterior mediastinal gland enlarged 2-3 diam , indurated by recent tuberculous infiltration.
"	" ..	One focus right retropharyngeal, all mediastinal greatly enlarged several small centers in both caudal lobes of lungs.
"	" ..	General in mediastinal and bronchial glands. several small centers ⅛-1 in. scattered through caudal lobe both lungs.
"	" ..	General tuberculosis both lungs, and thoracic glands, also of left retropharyngeal glands.
"	" ..	One retropharyngeal enlarged 3 in. diam., containing 3 recent caseous foci size of peas.
"	" ..	General in mediastinal and bronchial glands; one center 1 in. diam. in caudal lobe left lung.
"	" ..	.....
"	" ..	Both retropharyngeal and mediastinal glands generally, one center 4 x 5 in. in caudal lobe left lung softened.
"	" ..	Two mediastinal glands only, with few foci ⅛-¼ in. diam.
"	" ..	Both pharyngeal. bronchial and hepatic glands, one center 1 x 2 in in caudal lobe left lung, six foci ¼ in. diam. near right border liver.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Delaware county:										
Edwin Taylor	102.7	104.5	105	.....	105.7	.....	.....	.....	$10 00	$5 00
"	105	106	105.2	.....	103.8	.....	.....	.....	20 00	10 00
"	107	106.8	106.2	.....	105	.....	.....	.....	20 00	10 00
"	104	106.6	106	.....	106.2	.....	.....	.....	18 00	9 00
"	103.2	103.2	104	103.8	104.4	.....	.....	.....	25 00	12 50
"	104.1	106	105.4	.....	105	.....	.....	.....	22 00	11 00
"	101.4	102	105.3	.....	105	.....	.....	.....	25 00	12 50
"	101.4	101.8	101.8	.....	102.2	.....	.....	.....	.....	.....
"	102.5	105.3	106.2	.....	105.3	.....	.....	.....	15 00	7 50
"	101.8	102.8	105.2	.....	106	.....	.....	.....	23 00	11 50
"	101.7	102	102.2	.....	102.8	.....	.....	.....	.....	.....
"	101.6	102	102.1	.....	102.5	.....	.....	.....	.....	.....
"	102	102	101.5	.....	102	.....	.....	.....	.....	.....
"	101.5	101.6	101.2	.....	101.2	.....	.....	.....	.....	.....
"	103.8	105.5	106.8	.....	105.6	.....	.....	.....	28 00	14 00
"	102.9	104	106	.....	105	.....	.....	.....	10 00	5 00
"	102	101.8	102.2	.....	102.2	.....	.....	.....	.....	.....
"	100.6	101	101	.....	101.3	.....	.....	.....	.....	.....
"	101.7	101.8	101.7	.....	102	.....	.....	.....	.....	.....
"	106.8	106.4	106	.....	106	.....	.....	.....	25 00	12 50
	7 a. m.	9 a. m.								
"	101	101.4	.....	.....	.....	.....	.....	.....	.....	.....
"	101.2	101.1	.....	.....	.....	.....	.....	.....	.....	.....
"	102	102.1	.....	.....	.....	.....	.....	.....	.....	.....
	5 a. m.	7 a. m.	9 a. m.	11 a. m.						
George Forsyth	101.3	101.2	101	101.5	.....	.....	.....	.....	.....	.....
"	102.2	101.8	101.7	102	.....	.....	.....	.....	.....	.....
"	100.4	100.8	101	101.4	.....	.....	.....	.....	.....	.....
"	101.6	101.3	101.3	102	.....	.....	.....	.....	.....	.....
"	101	101	101	101.8	.....	.....	.....	.....	.....	.....
"	101.9	101.8	101.4	102	.....	.....	.....	.....	.....	.....
"	100.7	101	101	101.6	.....	.....	.....	.....	.....	.....
"	102.5	102.3	102	102.2	.....	.....	.....	.....	.....	.....
"	101	101.4	101.3	101.8	.....	.....	.....	.....	.....	.....
"	101.2	101.8	101.6	102	.....	.....	.....	.....	.....	.....
"	101.4	101.5	101.4	102.2	.....	.....	.....	.....	.....	.....
"	101.8	102	101.6	102.4	.....	.....	.....	.....	.....	.....
"	100.7	100.8	101	101.6	.....	.....	.....	.....	.....	.....
"	102	101.5	101.7	102.1	.....	.....	.....	.....	.....	.....
"	102	101.5	101.5	102	.....	.....	.....	.....	.....	.....
"	101.2	101.2	101.2	102	.....	.....	.....	.....	.....	.....
"	101	101	100.8	101.4	.....	.....	.....	.....	.....	.....
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.				
Dutchess county:										
George H. Briggs	104¾	106	107	107	106½	105	.....	.....	60 00	25 00
"	104½	105½	105¾	106½	105½	105	.....	.....	60 00	25 00
"	103¾	104¾	105½	105½	105	104	.....	.....	50 00	25 00
"	101½	101¼	101¾	101½	102	102	.....	.....	.....	.....
"	102	102	101½	101	101¾	102	.....	.....	.....	.....
"	101¼	101½	101¾	102	102	102¼	.....	.....	.....	.....
"	102	104	105	103½	104	103	.....	.....	60 00	25 00
"	101½	102	103½	105	105½	106	.....	.....	70 00	25 00
"	101½	101½	101½	102	102	102¼	.....	.....	.....	.....
"	102	101¾	101¾	102	102	102½	.....	.....	.....	.....
Alvah Burger	102½	101	101½	101¼	101½	102	.....	.....	.....	.....
"	102½	101¼	101½	101½	101¾	102	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Fair	F. L. Kilborne, V. S.	Both pharyngeal and thoracic glands, extensive, both lungs very extensive, abscesses in liver, largest 5-6 in. in diam.
"	"	Few foci ⅛ x ¼ in. in both retropharyngeal glands.
"	"	All thoracic glands greatly enlarged, centers softened, several small centers scattered through right lung, numerous small abscesses in liver, few foci in both udder glands.
"	"	Mediastinal glands generally, one center 2½ in. by 3 in. in caudal lobe left lung.
"	"	Both retropharyngeal and right bronchial glands each with few foci ⅛ in. by ¼ in. in diam.
"	"	Both retropharyngeal and mediastinal glands only.
"	"	Extensive in thoracic glands generally, one focus 1 in. by 2 in. near center caudal lobe, right lung.
"	"	
"	"	Left bronchial glands twice enlarged with small foci.
"	"	Both retropharyngeal, mediastinal glands, one center 3 in by 4 in. near center caudal lobe right lung.
"	"	
"	"	
"	"	
"	"	
"	"	Several small foci in hepatic lymphatic glands, also few small foci scattered ⅛ in. in few mesenteric glands.
"	"	Retropharyngeal glands only.
"	"	
"	"	
"	"	
"	"	Both retropharyngeal glands enlarged. Few mediastinal glands ⅜ in. in diam.; all indurated by recent tuberculous infiltration.
"	"	
"	"	
"	"	
Poor	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
	John Faust, V. S	Right and left lung, liver, posterior media, mesenteric.
	"	Right and left lung, liver, spleen, mammæ, uterus.
	"	General tuberculosis.
	"	
	"	
	"	
	"	General tuberculosis.
	"	Right and left lung, posterior and anterior mediastinal and liver.
	"	
	"	
Poor	"	
	"	

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.	6 p. m.	8 p. m.		
Dutchess count :										
Alvah Burger	102¾	101½	101	101¼	102	102½				
"	104¼	105	105½	105¾	106	105			$55 00	$35 00
James Daverson	101½	102¾	102½	102½	102	102				
"	102	102½	102½	102½	102½	102				
"	101¾	101½	101½	101¾	102	102				
"	103	104½	105½	106	105	105			50 00	25 00
"	102½	102¼	102¼	102	102	102½				
"	100	101	101	101	101½	101½				
"	103	102½	102	102¼	102½	102½				
"	102	104¾	105	105½	106	105			55 00	25 00
"	101½	101½	101¾	101½	101¾	102				
"	101	101	101½	101½	101½	102				
"	104¼	105½	105½	105½	106	105			50 00	25 00
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
David H. Vosburgh	104	105	106½	106	105	104½			52 00	25 00
"	101¼	103½	105¼	105¾	105	104¼			54 00	25 00
"	103¾	104	104¼	105	105¼	104			50 00	25 00
"	100¾	101½	101¾	103½	105	105½			50 00	25 00
Israel Weisberger	103½	104	104¾	105	105½	105			53 00	25 00
J. S. Harer	101	100¾	101¼	101	101	100¼				
"	100½	101	101½	101	101¼	100½				
"	100¾	101	101	101	101½	100				
"	100¾	101¼	100½	101	101½	101½				
"	101	102	102	101¾	101½	101¾				
"	101¾	101½	101	102	101¾	101				
"	101½	101½	101½	101½	101	101½				
"	101	100¼	101¾	101¾	100½	101¾				
"	101	101½	101	101½	100	100¼				
"	101¼	101½	101	102½	101½	101¾				
"	102	101	101	101½	101	102				
"	102½	103½	104	104¾	105	104			51 00	25 00
J. B. Wood	101	101½	101	101	101	100				
"	102½	103½	105	105½	104	103			53 00	25 00
"	101	101½	101¼	101½	101¾	102				
"	102¾	103	103	102½	102½	102				
"	101½	102	101½	101½	101¾	101				
"	100	101	101¾	101	101	100½				
"	101	101	101	101¼	101	101½				
"	101	101	101	101	101	101				
"	100½	101	100½	101	101¼	101½				
"	101	101	101½	101	101¼	101½				
"	101	101	101½	101	101¼	101				
"	100½	100½	00	101	101	101½				
"	101½	01½	101	101¼	101	101¼				
John Murtaugh	101¾	103¼	103½	104¼	104	103½			55 00	25 00
"	100½	101¼	101	101½	101½	101¾				
"	102	101½	102	102	101½	101½				
"	103¾	104½	105¼	105¼	105	105			25 00	12 50
John Lenehan	102	102½	104	103½	103½	103			50 00	25 00
Oliver D. Husted	101	102	103	104	104½	103			45 00	22 50
"	101¼	101½	101¾	102	101¾	101½				
"	101	101¾	101	101½	101	101				
"	102	102	102½	103	104	104			40 00	20 00
"	100¾	101½	100	100	101	100				
"	100¾	101¼	101	101½	101½	101½				
"	100	100	100¾	100¼	101	100				
"	101	101	101½	101	101¼	101				
"	101	101	101¼	101½	101½	101½				
"	101	101½	101¼	101½	101	101				
"	101½	101¼	101½	101½	101½	101½				
James L. Croft	102½	101½	101½	102	101½	102				
"	101½	101¼	101¼	102	102	102				
"	101	101½	101½	101½	101½	101½				
"	101½	101½	101½	102¼	101	101				

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem — Location of Lesions.
.....	John Faust, V. S	.....
.....	"	Intestinal chronic diarrhœa, retropharyngeal, lungs, liver.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Both lungs and mammæ.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Left lung and liver, very bad.
.....	"	.....
.....	"	.....
.....	"	Both lungs slightly liver spotted, anterior and posterior mediastinal quite large and broken down.
.....	"	Posterior and anterior mediastinal, liver, retropharyngeal and spleen.
.....	"	Posterior mediastinal, right and left lung, liver, mesenteries.
.....	"	General tuberculosis.
.....	"	Right and left lung, liver and mesenteries.
.....	" ...	Right lung, posterior mediastinal, liver, mesenteries and mammæ.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal, left lung, mesenteries and mammæ.
.....	"	.....
.....	"	Right and left lung, posterior and anterior mediastinal.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Good	"	Right and left lung, posterior and anterior mediastinal, liver and spleen.
"	"	.....
"	"	.....
"	"	Right and left lung, mesenteries and omentum.
.....	"	Anterior and posterior mediastinal, right lung and liver.
.....	"	General tuberculosis.
.....	"	.....
.....	"	.....
.....	"	Lungs, liver and spleen.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Poor	"	.....
"	"	.....
"	"	.....
"	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Dutchess county:										
James L. Croft	101	102	102	102	102	102	.....	.....	.....	.....
"	101	101¾	101¾	101½	101	101	.....	.....	.....	.....
"	101¼	102	102	101⅓	101½	101	.....	.....	.....	.....
"	100¼	101¼	101⅓	102	102	102	.....	.....	.....	.....
John S. Schouten	101½	103½	106¼	106¼	106	105	.....	.....	$44 00	$22 00
"	100	101	100¾	102¾	104	104	.....	.....	50 00	25 00
"	101	101	101½	101¾	101¾	101	.....	.....	.....	.....
Eugene Hans	104¾	106¾	107	106	105¾	.....	.....	.....	150 00	.....
"	101¾	103¾	106¼	106½	105¼	.....	.....	.....	120 00	.....
"	102	104¾	106	105½	104¾	.....	.....	.....	120 00	.....
"	103½	105	106	105¾	105	.....	.....	.....	135 00	.....
"	102¾	106½	106¾	106	105	.....	.....	.....	150 00	.....
"	102	102¼	103	103½	103½	.....	.....	.....	110 00	.....
"	102¾	105½	106½	106¾	106	.....	.....	.....	140 00	.....
"	102	103	106½	106¾	106	.....	.....	.....	125 00	.....
"	102½	104½	103¼	102	101¾	.....	.....	.....	150 00	.....
"	103½	103½	104½	104½	105¾	.....	.....	.....	120 00	.....
"	100¾	101½	103	105¼	105½	...	.....	.....	110 00	.....
"	103	104½	106¾	105½	105	.....	.....	.....	100 00	.....
"	101¼	102	103	103¾	104¼	.....	.....	.....	100 00	.....
"	102	103½	105¾	105	105	.....	.....	.....	100 00	.....
"	101½	101¾	103¼	103¾	104½	.....	.....	.....	140 00	.....
"	103½	105¼	106½	107¾	106¼	.....	.....	.....	75 00	.....
"	101	103	103	105¼	105½	.....	.....	.....	150 00	.....
"	103	104	105¼	105	105	.....	.....	.....	85 00	.....
"	106¾	107	106¼	106	106	.....	.....	.....	120 00	.....
"	105	107	106¼	104¾	103	.....	.....	.....	120 00	.....
"	104	107	103¼	106¾	105	.....	.....	.....	120 00	.....
										Total award.
"	106	107	106¼	105	104¾	.....	.....	.....	120 00	$1,240 00
	6.30 a. m.	8.30 a. m.	10.30 a. m.	12.30 p. m.	2.30 p. m.	4.30 p. m.				
Erie county:										
G. D. Briggs	101	101	101	101.4	101.6	101	.....	.....	.....	.....
"	101.2	101.6	102	102	102.6	102.8	.....	.....	.....	.....
"	101	102	101.4	101.4	102	102	.....	.....	.....	.....
"	101	101	101	101	101.6	101.8	.....	.....	.....	.....
"	101	101.2	100	100.2	101	101	.....	.....	.....	.....
"	101.2	101.6	101.4	101.4	101	101.4	.....	.....	.....	.....
"	102	103	102.4	102	102	102.8	.....	.....	.....	.....
"	101	101.4	100.8	100.8	101.6	102	.....	.....	.....	.....
"	101.4	101.2	101.6	101.6	102	101.8	.....	.....	.....	.....
"	101	101	101	101	101	101	.....	.....	.....	.....
"	102	104	105	105	105	107	.....	.....	.....	.....
"	101.6	102	101	101	101.6	101	.....	.....	.....	.....
"	101	101.2	101	101	102	101.8	.....	.....	.....	.....
"	101.4	101.8	101	101	101.8	101.6	.....	.....	.....	.....
"	101	102.4	101.4	101	102	101.6	.....	.....	.....	.....
	7 a. m.	9 a. m.	11 a. m.	3 p. m.						
Franklin county:										
James S. Amsden	103	104.8	105.7	104.8	.....	.....	.....	.....	25 00	12 50
"	105.7	106.8	106	106	.....	.....	.....	.....	35 00	17 50
"	106.2	106.4	106.1	106	.....	.....	.....	.....	35 00	17 50

mortems, Appraisals and Awards—*(Continued)*.

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Poor.....	John Faust, V. S....	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Liver, left lung and mesenteries.
"	"	Both lungs, posterior and anterior mediastinal glands, one large abscess in mammæ.
"	"	.....
Fine.....	"	Nodules in spleen and cheesy deposits in lungs, anterior mediastinal.
"	"	Tubercles in liver, posterior and anterior mediastinal, left lung and mesentery.
"	"	Tubercles in posterior mediastinal and liver, extensive in left lung and mammæ.
"	"	General tuberculosis.
"	"	Anterior and posterior mediastinal, left lung, one in the liver, mammæ.
"	"	Posterior and anterior mediastinal and mesentery.
"	"	Diffuse tuberculosis, both pleura extensive.
"	"	Liver throughout, posterior mediastinal, right mammæ, retroperitonea'.
"	"	One tubercle in left lung, liver throughout and mesentery.
"	"	Both mammæ, mediastinal, liver throughout.
"	"	Liver extensive, lungs throughout, both mediastinal and mesentery.
"	"	Three tubercles in liver, anterior mediastinal, one tubercle in right lung, spleen.
"	"	Posterior and anterior mediastinal, right lung, hepatic.
"	"	Mesentery, incipient tubercles on pericardium, left lung and liver.
"	"	General tuberculosis.
"	"	Both mammary, anterior and posterior mediastinal, both lungs extensive.
"	"	Posterior mediastinal, spleen.
"	"	Tuberculosis of larnyx, aperture reduced ⅚, posterior mediastinal, both lungs and liver.
"	"	Throughout lungs, spleen, posterior mediastinal, extensive degree.
"	"	Spleen, anterior and posterior mediastinal, left lung, liver and mammæ.
"	" ...	General tuberculosis.
"	"	General tuberculosis.
....	M. J. Henderson, V. S.	.....
.....	"	.....
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Good	F. L. Kilborne.....	One foci size large pea in right retropharyngeal gland.
"	"	Both retropharyngeal glands size hen's egg, with several softened foci on section.
"	"	Retropharyngeal and mediastinal glands; center 2x3 in. near middle caudal lobe left lung.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	7 a. m.	9 a. m.	11 a. m.	3 p. m.	2.30 p. m.	4.30 p. m.	6 p. m.	8 p. m.		
Franklin county :										
James S. Amsden	106.5	107.8	107.8	106	.....	.....	.....	.....	$25 00	$12 50
"	102.5	102.8	104	105	.....	.....	.....	.....	32 00	16 00
"	103.2	105	106.5	106	.....	.....	.....	.....	37 00	18 50
"	105.8	107.2	106.8	105.5	.....	.....	.....	.....	32 00	16 00
"	104	105	106.3	104.5	.....	.....	.....	.....	38 00	19 00
"	104.6	107.3	107.4	106	.....	.....	.....	.....	37 00	18 50
"	104	106	107.4	106.2	.....	.....	.....	.....	35 00	17 50
"	104.7	104.7	106.7	105.5	.....	.....	.....	.....	38 00	19 00
"	103	103	103	102.6	.....	.....	.....	.....	.....	.....
"	102.6	102.6	102.4	102.8	.....	.....	.....	.....	.....	.....
"	104	106.8	106.4	105.5	.....	.....	.....	.....	30 00	15 00
"	101.6	106.4	105.4	104.6	.....	.....	.....	.....	20 00	10 00
"	100.3	105.5	107	105.5	.....	.....	.....	.....	30 00	15 00
"	104.5	106.1	107.1	106.8	.....	.....	.....	.....	42 00	21 00
"	105.3	106.5	106	105.8	.....	.....	.....	.....	25 00	12 50
"	107.5	105.8	105.8	107.3	.....	.....	.....	.....	30 00	15 00
"	104	106.2	107.1	106.5	.....	.....	.....	.....	32 00	16 00
"	106	106.4	106.2	106	.....	.....	.....	.....	28 00	14 00
"	102.5	103	103.2	103.5	.....	.....	.....	.....	.....	.....
"	106.2	107	107	106.2	.....	.....	.....	.....	33 00	16 50
"	105.7	106.6	106.8	106.6	.....	.....	.....	.....	33 00	16 50
"	103.3	105.2	106.5	106	.....	.....	.....	.....	30 00	15 00
"	103	105	105.5	104.8	.....	.....	.....	.....	25 00	12 50
"	104	103.8	103.2	103	.....	.....	.....	.....	.....	.....
"	105	106.5	105.5	106	.....	.....	.....	.....	36 00	18 00
"	106.2	106	106.2	104	.....	.....	.....	.....	36 00	18 00
"	108	107.2	107	106	.....	.....	.....	.....	36 00	18 00
"	103.7	104	104.8	105	.....	.....	.....	.....	37 00	18 50
"	107.3	106.5	106.3	106.2	.....	.....	.....	.....	28 00	14 00
"	105.4	106.7	107.3	106.6	.....	.....	.....	.....	32 00	16 00
"	104.5	106.2	106.7	106	.....	.....	.....	.....	30 00	15 00
"	105.5	105.8	106	105	.....	.....	.....	.....	31 00	15 50
	5 a. m.	7 a. m.	9 a. m.	11 a. m.						
"	104.5	104.8	104.8	105	.....	.....	.....	.....	22 00	11 00
"	101.6	101.2	101.2	101.8	.....	.....	.....	.....	.....	.....
"	104.2	104.8	105.8	106	.....	.....	.....	.....	18 00	9 00
"	101.8	102.6	102.6	103.8	.....	.....	.....	.....	18 00	9 00
"	104.3	104.4	104.8	104.6	.....	.....	.....	.....	30 00	15 00
"	104.2	105.2	105.4	105.8	.....	.....	.....	.....	27 00	13 50
"	106.5	106.7	106.8	106.5	.....	.....	.....	.....	27 00	13 50
"	105.4	105.8	105.7	105	.....	.....	.....	.....	18 00	9 00
"	102.5	104	104.8	105	.....	.....	.....	.....	20 00	10 00
"	102	102	102	101.8	.....	.....	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Good	F. L. Kilborne.....	General thoracic tuberculosis.
"	"	Both retropharyngeal and mediastinal glands, a few small centers in caudal lobe left lung.
"	"	Mediastinal glands and several small foci on lungs.
"	"	Extensive in liver, few centers in lungs.
"	"	General tuberculosis.
"	"	Mediastinal glands and foci center caudal lobe left lung.
"	"	One focus ½ in. in liver.
"	"	Few small foci in caudal mediastinal glands, one focus size of pea in caudal lobe right lung.
"	"	.....
"	"	.....
"	"	Both retropharyngeal glands, center size fist in caudal lobe left lung.
"	"	Mediastinal and bronchial glands, extensive in cephalic, lobes both lungs.
"	"	Scattered foci, size of peas, in mediastinal, hepatic glands and in liver.
"	"	Mediastinal glands, 6 in. of tip right caudal lobe of lung entirely tuberculous.
"	"	Half dozen foci in mediastinal glands only.
"	"	Lymphatic glands, generally of throat and thorax, center, 2 in. x 3 in. in caudal lobe left lung, extensive in liver.
"	"	Several foci both retropharyngeal and in the mediastinal glands.
"	"	Several small foci in mediastinal glands only.
"	"	.....
"	"	Several, foci, mediastinal gland only.
"	"	Extensive in retropharyngeal and sub-maxillary glands, also in mediastinal glands.
"	"	Few small foci in mediastinal glands, nodule size fist in caudal lobe, right lung.
"	"	One small focus in liver, also one recent foci ¼ in. in right cephalic lobe of lung.
"	"	.....
"	"	Retropharyngeal and mediastinal glands, 3 in. to 4 in. of tip of caudal lobe left lung entirely tuberculous.
"	"	Several foci size of peas in retropharyngeal glands.
"	"	Both retropharyngeal glands with centers entirety softened.
"	"	Three small foci right cephalic, lobe of lung and several small foci in mediastinal glands.
"	"	Mediastinal gland and center size goose egg in caudal lobe left lung.
"	"	Both retropharyngeal glands and foci scattered in both lungs.
"	"	Retropharyngeal and mediastinal glands.
"	"	Several small foci, mediastinal glands only.
"	"	Both retropharyngeal glands, foci size walnut near tip of left caudal lobe.
"	"	.....
"	"	Mediastinal glands, several centers 1 in. to 2 in. in both caudal lobes of lungs.
"	"	Mediastinal glands, one center 1 in. in liver, foci in right cephalic and right ventral lobes.
"	"	Both retropharyngeal glands enlarged, each with several softened centers.
"	"	Two mediastinal glands, each with two foci size of peas.
"	"	Right retropharyngeal gland 3 in by 5 in. and center entirely softened, left slightly enlarged, one mediastinal gland, two foci.
"	"	Few small foci in mediastinal gland, several centers scattered through both lungs.
"	"	One foci retropharyngeal gland, several centers scattered through both lungs.
"	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	2.30 p. m.	4.30 p. m.	6 p. m.	8 p.m.		
Franklin county:										
James S. Amsden	103	103.2	103	103						
"	102	102.2	102.2	102						
"	103.2	103.3	103.6	103.4						
"	102.7	102.7	102.6	102.3						
"	102	102.2	102.2	101.8						
"	102.1	102.7	102.3	102.2						
"	102	101.8	101.6	102						
"	102.1	102.3	102.1	102						
"	102.3	102.4	102.7	102.8						
"	101.6	101.4	101.5	101.3						
"	102.4	103	104.7	105.8					$20 00	$10 00
"	101.7	101.7	101.8	102						
"	101.5	101.3	101.5	101.4						
"	101	101	101	101						
"	107.7	107.4	107.4	107					22 00	11 00
"	102.1	102.2	102	101.8						
"	102	102.1	101.8	102						
"	101.4	101.3	101.3	101.5						
"	101.3	101.1	101.8	101.8						
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Greene county:										
Russell G Sutton	101	101½	101½	101¼	101½	101¼				
"	100	101	101½	101	101¼	100½				
"	103	104½	106	105½	106½	106			55 00	25 00
"	101½	100¼	101½	101¼	102	101½				
"	100½	101	101	101½	101	101				
"	101	101	101	101	101	101				
"	102¼	103½	105	105	105	104½			50 00	25 00
"	102½	104½	106	107	107	106			60 00	25 00
"	101	101	101½	101½	101½	101				
"	101	101½	101	101	101	101				
"	101	101	101	101½	101	102				
"	100½	101	101¼	101½	101½	101½				
"	101½	101	101	101½	101½	102				
"	101½	101½	101½	101¾	101¼	101				
"	102¼	102	102	102	102¼	102				
"	102	102	102	102	102	102				
"	102	102	102	101½	102¼	102				
"	102	101½	101½	100½	100	100				
"	102½	101¼	101¼	101	100¼	101				
"	101	101	100	101	101	101				
"	102¼	101	101½	100	101¼	101½				
"	101½	101½	101	101¼	101¼	101				
"	102½	101	100¾	100¾	101	102				
"	102	101¼	101	101	101	101				
"	101¾	101½	101¼	101¼	101¼	102				
"	102	101	100½	101	101½	102				
Jefferson county:										
J. N. Ball & Son	102	102.4	102	102						
"	102	102.2	102	102						
"	103	103.6	102	102.4						
"	101.4	101.4	101.6	102						
"	102.6	102.8	102.4	102.6						
"	103	103.2	103	103						
"	105	105.4	105	105					41 00	20 50
"	102.6	102.8	103	103						
"	102.4	102.6	101.4	101.2						
"	102	102	102	102						
"	103	103.2	102.6	102.8						
"	102.8	102.8	102.4	103						
"	102.6	102.6	101.6	101.8						
"	102	102.2	101.8	101.6						
"	102.2	102.8	102.3	102.4						
"	102	102.2	102	102.2						

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Good	F. L. Kilborne	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	
"	"	One focus size pea left caudal lobe lung; two small foci in liver.
"	"	
"	"	
"	"	
"	"	Numerous small foci in cephalic mediastinal gland; one center at surface near caudal lobe left lung.
"	"	
"	"	
"	"	
"	"	
"	Robert D. Austin	
"	"	
"	"	Mammæ, anterior and posterior mediastinal glands, intestines and lungs.
"	"	
"	"	
"	"	
"	"	Mammæ, anterior and posterior mediastinal liver, mesenteries and small intestines.
	"	Mammæ, anterior and posterior mediastinal, liver, spleen and intestines.
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	John A. Bell	
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	"	
	"	Mesenteric, retropharyngeal and mammæ.
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 a. m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Jefferson county:										
J. N. Ball & Son	102	102	101.8	101.8	.....	.....	.....	.....	.....	.....
"	101.4	102	101.6	101.4	.....	.....	.....	.....	.....	.....
"	103	101.6	101.6	102	.....	.....	.....	.....	.....	.....
"	102	103.2	103	103.4	.....	.....	.....	.....	.....	.....
"	102.4	102.2	102	102.4	.....	.....	.....	.....	.....	.....
"	102	103.8	102.4	102.6	.....	.....	.....	.....	.....	.....
"	102	102.4	102.4	102.4	.....	.....	.....	.....	.....	.....
"	102	102.8	102	101.2	.....	.....	.....	.....	.....	.....
"	101	99.8	99.6	99.8	.....	.....	.....	.....	.....	.....
"	101.8	102	102	102.2	.....	.....	.....	.....	.....	.....
	5 a. m.	7 a. m	9 a. m.	11 a. m	1 p. m.					
Perry Lamphear	101.8	102 2	102.2	101.4	101.8	.....	.....	.....	.....	.....
"	101.8	102	101.8	102	102	.....	.....	.....	.....	.....
"	101.4	101	101.2	101.2	101.4	.....	.....	.....	.....	.....
"	101	101.4	102	101.6	101.4	.....	.....	.....	.....	.....
"	101.4	101.8	101.6	101.6	101.6	.....	.....	.....	.....	.....
"	101.4	102	101.8	101.6	101.8	.....	.....	.....	.....	.....
"	101.6	102	102	102	101.6	.....	.....	.....	.....	.....
"	101.4	102	101.7	101.6	101.4	.....	.....	.....	.....	.....
"	101.7	102.2	102	102	102	.....	.....	.....	.....	.....
	6 a. m.	8 a. m.	10 a. m.	12 m.						
E. R. Taylor	101.8	101.8	101.8	101.8	.....	.....	.....	.....	.....	.....
"	101.6	101.6	101.6	101.2	.....	.....	.....	.....	.....	.....
"	101.8	101.8	101.8	101.4	.....	.....	.....	.....	.....	.....
"	101.6	102	102	102	.....	.....	.....	.....	.....	.....
"	101.6	101.6	101.6	101.4	.....	.....	.....	.....	.....	.....
"	101.4	101.8	101.8	101.8	.....	.....	.....	.....	.....	.....
"	101.2	102	102	102	.....	.....	.....	.....	.....	.....
"	101.8	102	102	102	.....	.....	.....	.....	.....	.....
"	101.8	101.8	101.8	101.6	.....	.....	.....	.....	.....	.....
"	102.8	102.4	102.4	102	.....	.....	.....	.....	.....	.....
"	99.6	100	100	99	.....	.....	.....	.....	.....	.....
"	101.6	101.6	101.6	101 4	.....	.....	.....	.....	.....	.....
"	101.4	101.6	101.6	101.6	.....	.....	.....	.....	.....	.....
"	101.8	101.6	101.6	101.4	.....	.....	.....	.....	.....	.....
"	101	101	101	101	.....	.....	.....	.....	.....	.....
"	101.4	101.2	101	101	.....	.....	.....	.....	.....	.....
"	102	102	102	102.2	.....	.....	.....	.....	.....	.....
"	101.6	101.8	101.8	102.2	.....	.....	.....	.....	.....	.....
"	103 6	104	104	104.2	.....	.....	.....	.....	$31 00	$15 50
"	101.8	101.8	101.8	101.4	.....	.....	.....	.....	.....	.....
"	102	101.8	101.6	101.2	.....	.....	.....	.....	.....	.....
"	100	101.4	101.4	101	.....	.....	.....	.....	.....	.....
"	102	102	102	101.8	.....	.....	.....	.....	.....	.....
"	101.8	101.8	101 8	101 4	.....	.....	.....	.....	.....	.....
"	101.6	101.6	101.6	101	.....	.....	.....	.....	.....	.....
"	101.8	101.8	101.8	101.4	.....	.....	.....	.....	.....	.....
"	102	101.8	101.8	101.8	.....	.....	.....	.....	.....	.....
"	102	102	102	101.6	.....	.....	.....	.....	.....	.....
"	102	101.6	101.6	101.4	.....	.....	.....	.....	.....	.....
"	101.8	101.8	101.8	102	.....	.....	.....	.....	.....	.....
"	101.4	101.6	101.4	104	.....	.....	.....	.....	36 00	16 00
"	101.8	101.8	101.8	101.6	.....	.....	.....	.....	.....	.....
	6 a. m.	8 a. m.	10 a. m.	11 a. m.	12 m.					
T. E. Beacher	101	101	100	101	101	.....	.....	.....	.....	.....
"	101.6	101.4	101.6	101.4	101.4	.....	.....	.....	.....	.....
"	102	102	101.4	100	101	.....	.....	.....	.....	.....
"	102	102	102	101.8	101.6	.....	.....	.....	.....	.....
"	101	101	99	100	100	.....	.....	.....	.....	.....
"	101.4	101.4	101.6	101.4	101.2	.....	.....	.....	.....	.....
"	101.4	101.4	101.6	101.4	101.6	.....	.....	.....	.....	.....
"	102	101.6	101.8	101.6	101.4	.....	.....	.....	.....	.....
"	101.6	101.8	101.8	101.6	101.4	.....	.....	.....	.....	.....
"	101.6	101.2	101.4	101.2	101	.....	.....	.....	.....	.....
"	102	102	102	101.6	102	.....	.....	.....	.....	.....
"	102	102	101.6	101.6	101.6	.....	.....	.....	.....	.....
	101.4	101	101	101	101.4	.....	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
	John A. Bell	
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	"	Mesenteric and mammæ.
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	"	Retropharyngeal and mesenteric.
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	M. J. Henderson, V. S.	
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	11 a. m.	12 m.	4 p. m.	6 p. m.	8 p. m.		
Jefferson county:										
E. B. Emerson	102	101	101	101.6	101.4					
"	102	100	100.4	100.6	100.4					
"	102	101.4	101.6	101.4	100					
"	102.6	101	100	101	100					
"	101.4	101.6	101.4	101.1	101					
"	101.4	101.4	101.6	101.8	101.4					
"	101.4	101.6	101.4	101.4	101.6					
"	101.4	101.6	101.6	101.6	101.4					
"	101.4	101.4	101.4	101.6	101.8					
"	102	102	102	99.6	100					
"	102	101.4	101.6	101.4	101					
"	102	101.4	101.4	101.8	101.6					
"	102	101.6	101.6	101.4	101.6					
"	102	101	101	101	101.4					
"	102	101	101	101.4	101.6					
	8 a. m.	10 a. m.	11 a. m.	12 m.	1 p. m.					
A. R. Flower	102	102	101.8	102	102					
"	102	101.6	101.6	101.8	102					
"	102	102	102	102	102					
"	102	101.8	101.8	101.6	101.8					
"	102	102	102	101.6	102					
"	101	102	101.6	101.4	101					
"	102	102	101.4	101.4	101.6					
"	100.6	102	101.6	101.4	101.6					
"	102	102	102	101.4	101.6					
"	101.8	102	101.8	101.6	101.4					
"	101	103	101	101.2	101					
"	101.2	101	101.6	102	101.8					
"	101.8	102	101.6	101.8	101.6					
"	101.6	101	101	101.4	101					
"	101	102	101.8	101.6	101.8					
"	102	102	101.8	101.8	101.6					
"	107.2	107.6	107.4	107	107				$125 00	$60 00
"	101.4	101.4	101	101	101					
"	102	102	102	102	101.6					
"	104	104	104	104	104				150 00	60 00
"	101	101	101.2	101	101.4					
"	101	101.6	101	101.2	101					
"	102	102	102	102	102					
"	101	101.6	101.4	101.4	102					
"	101.4	101.2	101	101	101					
"	102	102	102	102	102					
"	101.4	101.6	101.4	102	101.8					
	6 a. m.	8 a. m.	10 a. m.	12 m.						
Albert Mahew	101	101.2	101	101.6						
"	100.6	101	101	101						
"	102	101.6	101	101.4						
"	102	102	102	102						
"	102	101.6	101	101.8						
"	101.8	101.8	101	101.2						
"	101.4	101.8	101.2	101.6						
"	101.4	102	101	101						
"	101	101.6	101.8	101.2						
"	101.8	101.4	101.8	102						
"	101.6	101.8	102	101.2						
"	102	101.8	101.8	101.8						
"	101.4	102	102	101.8						
"	101.6	101.8	101.6	102						
"	101.8	101.8	102	102						
"	101.8	102	102	102						
"	101	100.6	101.4	101						
"	102	101.8	101.4	101.8						
"	101.8	101.4	102	101.8						
"	101.4	103	103	102						
"	101.4	101.6	101.6	101.6						
Herbert Surnee	102	102	102.2	103						
"	102.8	103	103.2	103.2						
"	102	104.6	103	102.8						
"	101	101	101	101						

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
	M. J. Henderson, V. S.	
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	"	Pulmonary mediastinal.
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	"	Mediastinal and retropharyngeal.
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	John A. Bell	
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	1 p. m.	4 p. m.	6 p. m.	8 p. m.		
Jefferson county:										
Herbert Surnee	101.8	102	101.8	101.4						
"	102.4	103	102.6	102.8						
"	101.8	101	102	102.4						
"	102.3	102.4	103	101.4						
"	102	101	101.4	101.8						
"	102	102.4	103	103						
"	103	103	102.4	102						
"	101.8	102	102	102.4						
	7 a. m.	9 a. m.	11 a. m.	12 m.						
George H. Smith	101	101	101	101						
"	101	100	100.6	101						
"	101	101	101	101						
"	103	102.4	101.4	101.4						
"	101	101	101	101						
"	100.6	101	101.4	101.4						
"	101	101	101	101						
"	101.2	101.8	101.6	101.8						
"	101.8	101.4	101.4	101.2						
"	100.6	100	101	101						
"	101	102	101.6	101.2						
"	102	101.8	101.8	101.6						
"	102	101.8	101.6	101.6						
"	101.4	101	101	101						
"	101	101.6	101	101.2						
"	100	100	100	100						
"	101	101.4	100.8	101.4						
"	101.4	101	101	101						
"	101.4	101	101.4	101						
"	102	102.4	102	102						
"	100	99	100.2	100.4						
"	100	100	99	99.6						
"	101	100.4	98.4	99						
"	101	101	100	100.6						
"	101.2	101.6	101.4	101.4						
"	102	102	102	102						
"	101	101.6	101.4	101.6						
"	100	101.6	101	101						
"	104.2	104.2	105	105					$45 00	$22 50
"	101	101	101	100.8						
"	99	101.2	101	101.4						
"	101.4	102	102	101.6						
"	100.6	101	101	101.4						
"	100	101	100.6	100.8						
"	101	99	101.4	101.4						
"	100.8	100.6	100	100.4						
"	99	99.6	100.6	100						
"	100	101.6	100	100.4						
"	100.6	101.6	101	101						
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Montgomery county:										
Wm. E. Copley	101¼	100	100	100	100	100				
"	100.5	100	101	100	100	100.5				
"	101	100	100.5	101	100	100				
"	100.5	100	100.5	100.5	100.5	100				
"	100.5	101	100.5	100.5	101	101				
"	101.2	101	100.5	101	100.5	101				
"	100.5	101	101	101	101	101.5				
"	101½	101	101½	101	100	101				
"	101	101½	100½	100½	100½	101				
"	100.5	101	100.5	101	100.5	101				
"	101	101	101	101¼	101	101.5				
"	100.5	101	100.5	101.5	101	101.5				
"	101	101	101	101	101.5	101				
"	101.5	101.5	101¼	101¼	101	101.5				
"	101	101¼	101	101	101¼	101				

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.— Location of Lesions.
	John A. Bell	
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	M. J. Henderson	
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	M. J. Henderson, V. S.	
	"	
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	"	
	"	Mesenteric.
	"	
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	Robt. D. Austin	
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection. 6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.	Appraisement.	Award.
Oneida county:										
Edwin M. Sperry	101.5	102	102	104	103.5	102.5			$40 00	$20 00
"	103.5	105.5	106¼	105¼	104½	104			40 00	20 00
"	104½	105¾	106	105	105	103½			40 00	20 00
"	102¾	103	103½	102½	102½	102			40 00	20 00
"	101½	102¾	103	103¾	102¾	102½			22 00	11 00
"	102	102	102¾	104	103½	103			22 00	11 00
"	102	102	102½	103½	102½	102½			10 00	5 00
	4 a. m.	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.				
E. M. Marson	101	101	102	101.4	101.4	101.4				
"	102	102	102	102	102	102				
"	103	103	106	106	106	106.4			51 00	25 00
"	101	100.4	101.8	10[illegible]	101.6	101.6				
"	100	100	101	101	101	101				
"	101	101	102	102	101.6	101				
"	103	103	103	103	102	102.2				
"	101.4	101	102	102	101.8	101.6				
"	102	102	102	102	101.6	101.4				
"	101.6	101	103	106	105.4	105			50 00	25 00
"	101.8	101.8	102	102	102	101.8				
"	101	101	101.8	102	102	102				
"	101	101	102	102	101.6	101.6				
"	100.6	100.6	101.8	101.8	101.4	101.2				
"	101	101	102	102	101.6	101.4				
"	104	103	103	101.6	101.4	101.4				
"	102	102	102	102	101.8	101.8				
"	102	102	103	102	101.6	101.4				
"	102	102	101.8	101.6	101.8	101.8				
"	101	101	101.8	101.4	101	101				
"	102	102	101.4	101	101	101				
"	102	102	102	10'.8	101.4	101.2				
"	101	101.4	101.2	101.4	101.2	101.4				
"	103	103	105	107	107.4	116 2			45 00	22 00
"	101	101	102	101	101	101				
"	101	100	101.2	101.4	101.2	101.2				
"	101	101	102.8	102	102	101				
"	100	100	101.8	101.6	101.4	101.6				
"	101	101.8	102	102	101.8	102.6				
"	101.6	101.8	102	101.6	101.6	101.4				
"	101	101	101	101	101	101.2				
"	103	103	106.2	106	106	106			43 00	22 00
"	101	101	101.4	101.2	101.4	101.2				
"	101	101	101	101	101	101				
"	101	101	101	101.4	101	101				
"	101.2	101	101	101.4	101	101.4				
"	101	101	101	101	101	101.2				
"	101	101	101.4	101	101.2	101				
"	101	100.8	102	101.6	101.4	101.6				
"	101	101.4	101.8	101.4	101.4	101.2				
"	101.4	100.8	101	101	101.4	101.4				
"	101.6	101.4	101	101	101.2	101.4				
"	101	101.8	101.8	101.4	101	101				
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.				
J. W. Douglas, M. D.	103	103.6	104.6	106	107	106.8			27 00	13 50
"	101	101.2	101.4	101.6	101.8	101.2				
"	101.6	101	101.4	101.6	101.4	101				
"	101.4	101.2	101.8	101.6	101.4	101.6				
"	101.4	103	107	106.8	106.8	106			40 00	20 00
"	101.2	101	101.4	101.4	101	101.2				
"	101.6	101.4	101.6	101.4	101	101				
"	102	101	101.4	101.6	101.6	101.8				
"	101	101.4	101.6	101.4	101.4	101.2				
"	101.4	101	101	101.2	101.4	101.4				
"	101	101.2	101	101.2	101.2	101.4				
"	101.6	101.4	101.6	101.6	101 4	101.4				
"	102	102	101.8	101.6	101.8	101.8				
"	101.4	101.2	101	101.2	101.4	101.6				
"	101.8	101.4	101.2	101.6	101.2	101.6				
"	101.2	101.2	101.4	101.2	101.4	101.4				

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	Robt. D. Austin	Right and left lung; mediastinal glands; liver and small intestines.
.....	"	Liver, spleen, small intestines and mesentery.
.....	"	Lungs, liver, spleen, mediastinal glands and mesentery.
.....	"	Liver, mammary and mediastinal glands.
.....	"	Mediastinal glands, liver, spleen and small intestines.
.....	"	Liver, mediastinal glands and small intestines.
....	"	Small intestines and mesenteric.
.....	M. J. Henderson	.....
.....	"	.....
.....	"	Retropharyngeal pulmonary mediastinal.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mammæ, pulmonary and mediastinal.
.....	"	.....
.....	"	.....
.....	"	.....
....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mediastinal, mamma and mesenteric.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Pulmonary, mediastinal.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
....	"	Mediastinal, mammæ and pulmonary.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mediastinal and mesenteric.
.....	"	.....
.....	"	.....
.....	"	.....
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Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	1 p. m.	6 p. m.	8 p. m.		
Oneida county:										
J. W. Douglass, M. D.	101.8	101.6	101.2	101	101	101.2				
"	102	101.8	101.6	101.8	101.6	101.8				
"	101.2	102	102	102	102	102				
"	102	102	102	102	102	102				
"	102	102	102	102	101.8	101.6				
"	101.8	101.4	101.2	101.4	101.2	101.2				
	4 a. m.	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.				
Onondaga county:										
John Revoir	103.2	103.6	104.2	103.6	102.2	102.4				
"	101.2	101	101	101	101	101.2				
"	102	101.2	101	101	101	101				
"	101.4	101.2	101.4	101.4	101.4	101.4				
"	105.2	106	106.2	105.4	105	106			$48 00	$24 00
"	102.4	102	103	103.6	104	102.6			45 00	22 50
"	104.2	105.6	105.6	104	103	102.4			35 00	17 50
	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.	5 p. m.				
Charles Pratt	102.2	102.4	104.6	104.6	106	105.8			125 00	60 00
"	102.2	101.2	101.2	102	102.4	102.4				
"	101.6	101.2	101.2	101.4	101.8	101.4				
"	102	102	102	102.4	102.4	102				
"	101	102	102	101.4	101.2	101.4				
"	102.4	102	102	102.6	102.2	102.4				
"	101	101	101	101.2	101.6	101.6				
"	101	101	101	102	101.4	102				
"	101.4	101.8	101.8	101.6	102.8	102.6				
"	102	101.8	101.8	102.2	101.6	102				
"	101.6	101.6	101.6	101.6	101.6	101.8				
"	101	100.8	100.8	101	100.8	101.2				
"	102	101.8	101.8	101.4	102.4	102				
"	101.6	101.6	101.4	101.8	101.8	102.4				
"	101.8	100.6	100.6	101.6	102	101.2				
"	101.8	101	100.6	101.4	101.4	101				
"	101.6	101.4	101	101.2	100.6	101.2				
"	102	102	102	101.6	101.6	101.6				
"	101.6	100.2	100.4	101.4	101	101.6				
	4 a. m.	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.				
W. Higgins	101	101	101	101.4	101.6	101.2				
"	99	100	100.2	100.4	101	100.2				
"	101	101.6	100.6	101.6	101.4	101.4				
"	101.6	101	100	100	100.4	100.4				
"	100	101	101.4	101.8	101.4	102				
"	100	101	100.2	101.8	101.6	100.4				
"	100	100.4	102.2	100	101.2	101.2				
"	100.4	100.6	100.4	100.2	100.6	100.4				
"	100.6	101	100.6	101	100.2	100.4				
"	100	100	100.6	101	101	101.4				
"	102.2	101.8	102	101.4	102	101.6				
"	101	100.6	101.4	101	100.4	101				
"	101.2	101	101.6	101.2	101.4	101				
"	101.2	101	101	101.4	101.2	101.2				
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.				
Mrs. C. Houghton	101	101	101	101.6	101	101				
"	101.2	101	101.4	101	101	101				
"	101.6	101.4	101	101.2	101.4	101.2				
"	103	104	105	105	106	106			45 00	22.50
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Orange county:										
George W. Watts	101½	100¼	101½	102	101¾	102				
"	101	101¾	101½	101¼	101½	101¾				
"	101½	101¼	101¼	101½	101½	102				
"	101	101	101	101¼	101	102				
"	101	101	101	101	101½	101½				
"	102½	102	102	101¾	102	102				

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.— Location of Lesions.
.....	M. J. Henderson	.....
.....	"	.....
.....	"	.....
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.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Retropharyngeal, anterior and posterior; mediastinal and pulmonary.
.....	"	Retropharyngeal, mediastinal and mesenteric.
.....	"	Retropharyngeal, mediastinal and mammæ.
.....	"	Pulmonary, mediastinal and mesenteric; lymphatic glands, also numerous small subcutanious nodules.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
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.....	M. J. Henderson, V. S.	.....
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.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Pulmonary, hepatic, mesenteric.
.....	John Faust	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection. 6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.	Appraisement.	Award.
Orange county:										
George W. Watts	101	101	101	101¼	101¾	101¾	......	......	......	......
"	102¾	104	104¾	105	106	105	......	......	$52 00	$25 00
"	102¼	102½	102	102¼	102	102½	......	......	......	......
"	102	101¼	101½	101	101½	101½	......	......	......	......
J. S. Miller	101¾	105	105	106	105	104	......	......	40 00	20 00
"	105	105½	106½	105	104½	104	......	......	40 00	20 00
"	102¾	104¼	105½	106	105	105	......	......	45 00	22 50
"	101	101	101	102¼	102	102	......	......	......	......
"	99½	100	100½	101	101	101½	......	......	......	......
"	103	103¾	103	102½	102¾	102	......	......	......	......
"	100½	101¼	101½	102	101½	101¾	......	......	......	......
"	101¼	101	101½	102	101½	102	......	......	......	......
"	104	104½	104	105½	106	105	......	......	45 00	22 50
"	102¼	104	105	105	105	104	......	......	50 00	25 00
"	102	102½	104	104½	105	104	......	......	40 00	20 00
"	100¾	101½	101¾	103	102¾	103	......	......	......	......
"	101½	101½	101	101½	101	101½	......	......	......	......
"	102	100½	100½	100½	102	102	......	......	......	......
"	100¼	102	104	104	105	105	......	......	55 00	25 00
"	101½	100	101	101	102	102	......	......	......	......
"	101½	101½	102	104¾	104¼	105	......	......	48 00	24 00
"	101	101	101½	101¼	102	102	......	......	......	......
"	100½	101	101	101	101½	102	......	......	......	......
"	101	101	101	101	101½	101¾	......	......	......	......
"	101½	101¾	101	101	101	101½	......	......	......	......
"	102	103	101¼	101½	102¼	101	......	......	......	......
"	102	102	101¾	102	101	102½	......	......	......	......
"	101½	100	100½	101	102	101	......	......	......	......
"	100	100	100	101	102	102	......	......	......	......
"	100	100½	101	102	102	102½	......	......	......	......
Poor-house farm	101¾	101½	101½	102	101¾	101½	......	......	......	......
"	101	100¾	101	101	101	101	......	......	......	......
"	101	101	101¼	101½	101¾	102	......	......	......	......
"	102¼	103	102¼	102	102	101½	......	......	......	......
"	104	105½	105½	104½	105	104	......	......	50 00	25 00
"	102½	103	102¼	102¾	102	102¼	......	......	......	......
"	107	106¾	106	106	105	105	......	......	51 00	25 00
"	105	104¼	105	106	106	105	......	......	51 00	25 00
"	107	107	105¾	106	106	105	......	......	50 00	25 00
"	104	106	107	106	106	105	......	......	50 00	25 00
"	101	102	101½	102	102	102	......	......	......	......
"	105	106¾	105¾	105	104	104	......	......	52 00	25 00
"	105	106	106	105¼	104½	104	......	......	50 00	25 00
"	106¾	107	106½	106¼	106	106	......	......	51 00	25 00
"	107	107¾	106½	106	106	105	......	......	52 00	25 00
"	102¾	101¾	102½	102½	100¼	102	......	......	......	......
"	107	106½	106½	106	106	106	......	......	50 00	25 00
"	105½	107½	106½	105	105	104½	......	......	50 00	25 00
"	101	103	102	103	102	102¼	......	......	......	......
"	107	106¾	106	106	105½	105	......	......	52 00	25 00
"	104½	103½	106½	106	105¾	105	......	......	51 00	25 00
"	102½	102	101¾	101¾	102	102	......	......	......	......
"	102½	102½	102	102	102	102	......	......	......	......
"	104½	106½	105	105	105½	105½	......	......	50 00	25 00
"	103¼	105	105	105¾	105½	105	......	......	50 00	25 00
"	106¾	107	106½	106¾	106	106	......	......	50 00	25 00
"	101½	102	104	106¼	106¼	106	......	......	52 00	25 00
"	101¼	102	102	102¼	102	102	......	......	......	......
"	106	105	103	103½	104	103	......	......	50 00	25 00
"	108	108	107¼	106½	106	106	......	......	50 00	25 00
"	105	106¼	106	105	105	105	......	......	51 00	25 00
"	104	101	101	101	101	101	......	......	......	......

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	John Faust	.....
.....	"	Both lungs, liver and posterior mediastinal.
.....	"	.....
.....	"	.....
Poor.	"	Anterior and posterior mediastinal, liver and left lung.
"	"	Posterior mediastinal, spleen, mesenteric and liver.
"	"	Anterior and posterior mediastinal and left lung.
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Anterior and posterior mediastinal; adhesion of lungs to ribs; both lungs and mammæ.
"	"	Both lungs.
"	"	Both lungs, anterior and posterior mediastinal, also adhesion to ribs.
"	"	.....
"	"	.....
"	"	.....
"	"	Liver anterior and posterior and mediastinal mammæ.
"	"	.....
"	"	Both lungs and anterior and posterior mediastinal.
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Lungs, liver, mesenteric and spleen.
"	"	.....
"	"	General tuberculosis.
"	"	General tuberculosis.
"	"	General tuberculosis.
"	"	Anterior and posterior mediastinal, liver; scapular glands as large as man's head.
"	"	.....
"	"	Left mammæ extensively, anterior and posterior mediastinal, liver and mesentines.
"	"	Lungs, both hepatic, anterior and posterior mediastinal.
"	"	Both lungs and liver.
"	"	Lungs and mammæ.
"	"	.....
"	"	Liver, anterior and posterior mediastinal and mammæ.
"	"	Lungs and mammæ.
"	"	.....
"	"	Anterior and posterior mediastinal, liver and left lung.
"	"	Lungs, liver and mammæ.
"	"	.....
"	"	.....
"	"	Anterior and posterior mediastinal and hepatic slight.
"	"	Both lungs extensive and spleen.
"	"	General tuberculosis.
"	"	Anterior and posterior mediastinæ, very large and mammæ.
"	"	.....
"	"	General tuberculosis
.....	"	Lungs and anterior mediastinal.
.....	"	Lungs, liver and spleen.
.....	"	.....

Table of Tuberculin Tests, Post-

OWNER.	TEMPERATURE AFTER INJECTION.								Appraisement.	Award.
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	2 p. m.	3 p. m.	6 p. m.	8 p. m.		
Oswego county:										
Edward Lee	102	101	101.2	102	102	102	......	......	....	....
"	101.4	101.8	104.4	101.8	104.6	101.4	......	......	....	....
"	102	101	101.2	102	102	102	......	......	....	....
"	101.4	101.8	101.4	101.8	101.6	101.4	......	......	....	....
"	102	102	101.8	101.8	101.2	101	......	......	....	....
"	100	101.6	102	101.6	101.4	101.2	......	......	....	....
"	101	101.6	101.6	102	102	102	......	......	....	....
"	100	101	102	102	102	101.6	......	......	....	....
"	100.4	100.8	102	101.6	101.2	101.4	......	......	....	....
"	101.6	101.4	101	101.6	101.6	101.6	......	......	....	....
"	103	103	102.6	102.6	102	101.8	......	......	....	....
"	101	100.6	101.8	102	101.8	101.8	......	......	....	....
"	101	101	101	101	101.6	101.4	......	......	....	....
"	101	101.4	102	101.4	101.8	101.6	......	......	....	....
"	100	101.6	101.6	101.2	101	101.4	......	......	....	....
"	100	101.2	101	100.6	101	101	......	......	....	....
"	100	101.8	101.2	101.2	101.8	101.6	......	......	....	....
"	102	101.4	101.6	101.4	101.6	101.4	......	......	....	....
"	101.8	101.6	102	101.8	101	101	......	......	....	....
"	102	101.6	102	102	102	102	......	......	....	....
"	102	101.4	101.4	101.2	101	101.2	......	......	....	....
"	101	101.4	102	101.8	101.8	101.8	......	......	....	....
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Otsego county:										
Dow M. Webster......	101½	102	101¼	101	103½	104	......	......	$35 00	$17 50
"	101	103	104½	104¾	106	107	......	......	44 00	22 00
"	101¼	103	104½	105	106	106¼	......	......	43 00	21 50
"	103¼	104½	105	106	105½	105	......	......	50 00	25 00
"	102	102	102	102½	103	104½	......	......	32 00	16 00
"	102	104	105½	105½	106	106½	......	......	40 00	20 00
"	101½	101	103	104½	105½	106	......	......	35 00	17 50
"	102¼	104	105½	105½	105	106	......	......	38 00	19 00
"	104¼	105¼	106	105	105½	105	......	......	50 00	25 00
"	102¼	103½	104½	105½	106	106	......	......	40 00	20 00
"	101	101	101	101½	103¾	104	......	......	38 00	19 00
"	102	101¾	103½	104¾	106½	105	......	......	45 00	22 50
"	101	101	101½	101	102	101	......	......	....	....
"	101	101½	104	105½	106	105	......	......	28 00	14 00
"	102	101½	102	102½	104	105	......	......	55 00	25 00
"	102½	105	106	106	106	105½	......	......	43 00	21 50
"	101	101½	101½	102	102	102	......	......	....	....
"	102	103	104¾	105	107½	107	......	......	46 00	23 00
"	102	102	102½	02½	105	106	......	......	34 00	17 00
"	101	103½	104	105	101½	102	......	......	45 00	22 50
"	101½	102	102	102	101½	102	......	......	....	....
"	101½	101	101½	102	101½	102	......	......	....	....
"	102	102	102¼	102½	102	102	......	......	....	....
"	100	101	101½	100	101½	102	......	......	....	....
Mrs. Maria McCabe	102	101	102½	103	104½	103¾	......	......	28 00	14 00
"	102¼	103¼	105	105¼	105	104½	......	......	38 00	19 00
"	102½	103½	105½	105	106	104	......	......	35 00	17 50
"	105	106½	106	10[illegible]	105½	104½	......	......	40 00	20 00
"	103	105½	104¼	104½	105	104½	......	......	10 00	5 00
Anson Bingham	101	101¾	103	103½	103½	103	......	......	27 00	13 50
"	101	101	101	101½	101½	101½	......	......	....	....
"	101½	101½	102½	103½	102½	102	......	......	....	....
"	101	101	102	101½	101½	101	......	......	....	....
"	102	104	105	104	103½	103	......	......	20 00	10 00
"	104½	105½	106	106	105	104	......	......	30 00	15 00
"	100½	102	104	103	101½	102	......	......	37 00	18 50
"	100	101	101½	101	101	101½	......	......	....	....
"	101¼	101½	103	103	102	101½	......	......	22 00	11 00
"	105¼	105	105	105	105	104	......	......	28 00	14 00
"	101½	103	104	104	102½	102	......	......	28 00	14 00
Roland Trask......	102¼	101½	101½	101½	101	101¾	......	......	....	....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	M. J. Henderson	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Bad.....	Robt. D. Austin	Mammary glands, intestinal, mesentery, mediastinal, liver.
"	"	Mammary glands, intestinal, lungs, mediastinal.
"	"	Mammary, intestinal, mesentery, mediastinal, liver.
"	"	Mammary, intestinal, mesentery, mediastinal
.....	"	Intestinal, mesenteries, mediastinal, liver, spleen.
.....	"	Mammary, mediastinal, intestinal, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary, mediastinal, intestines. liver.
.....	"	Mammary, mediastinal, intestines, liver.
.....	"	.....
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary, mediastinal, intestines, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	.....
.....	"	Mammary, mediastinal, lungs and liver.
.....	"	Mammary, mediastinal, intestines and liver.
.....	"	Intestines, mesenteric, mediastinal, lungs, liver.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mammary, mediastinal lungs, liver.
.....	"	Mammary, mediastinal, lungs, liver.
.....	"	Mammary mediastinal. lungs, liver.
.....	"	Mediastinal, lungs, liver intestines mesenteric.
.....	"	Mediastinal, liver, mesentery.
.....	"	Mammary, mediastinal, liver, intestine, mesenteries.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mammary, mediastinal, intestines, mesentery, lungs, liver.
.....	"	Mammary, mediastinal, intestines, mesentery, lungs, liver.
.....	"	Mammary, mediastinal, intestines, mesentery, lungs, liver.
.....	"	.....
.....	"	Mammary, mediastinal, intestines.
.....	"	Mammary, mediastinal, intestines, mesentery, lungs, liver
.....	"	Mammary, mediastinal, intestines, mesentery.
.....	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Otsego county:										
Roland Trash	102	101½	101½	101	101½	101	.....	.....	.....	.....
"	101½	101½	101	101	101½	101	.....	.....	.....	.....
"	102	101½	102	101½	101	101	.....	.....	.....	.....
"	101½	102	102	101½	101½	101½	.....	.....	.....	.....
"	101¾	101½	101	101	101½	102	.....	.....	.....	.....
"	101	101½	101	101	101½	101½	.....	.....	.....	.....
"	102	101¾	102	101½	101	101½	.....	.....	.....	.....
"	101½	101½	101	101	101½	102	.....	.....	.....	.....
"	101	101	101	101	101½	101½	.....	.....	.....	.....
"	102	101½	101½	101	101	101½	.....	.....	.....	.....
"	102	102	102	101½	102	102	.....	.....	.....	.....
Frank C. Sessions	104	106	106¾	107	106½	105½	.....	.....	$50 00	$25 00
"	101½	101	101	101	102	102	.....	.....	.....	.....
"	101	101	101	101	101¼	101½	.....	.....	.....	.....
"	101	101½	101	102	102	102	.....	.....	.....	.....
"	101½	101	101½	101	101½	102	.....	.....	.....	.....
"	101	102½	104½	105½	104¾	104	.....	.....	35 00	17 50
"	101	104	105	106	105¾	105	.....	.....	50 00	25 00
"	101	101	101¼	101½	101	101½	.....	.....	.....	.....
"	100½	100½	101½	101	101¼	102	.....	.....	.....	.....
"	101	101	101	101	101¾	100½	.....	.....	.....	.....
"	101	101	101	101	101	101½	.....	.....	.....	.....
"	101	101	101	101¾	101	101	.....	.....	.....	.....
"	101	101	101	101	101	101	.....	.....	.....	.....
"	101	101½	101	101	101	101½	.....	.....	.....	.....
"	101	101½	101	101	101½	101¾	.....	.....	.....	.....
"	102	101½	101½	102	102	102	.....	.....	.....	.....
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.				
M. A. Becker	101	101	108	105	105	105	.....	.....	40 00	20 00
"	101.4	99	100	102	102	102	.....	.....	.....	.....
"	101	102	102	102	102	102.2	.....	.....	.....	.....
"	101	101	101.8	101.8	101.6	101 8	.....	.....	.....	.....
"	101	99	101	102	102	102	.....	.....	.....	.....
"	101	100	101	101	101.4	102	.....	.....	.....	.....
"	101	100	102	102	101.4	101.6	.....	.....	.....	.....
"	102.6	103.4	104.8	106	105	105.4	.....	.....	130 00	60 00
"	102	101.4	104.2	105.4	106	105.8	.....	.....	125 00	60 00
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Edwin Lynes	101½	104	105	106	106	105	.....	.....	52 00	25 00
"	102	103	104	105	105	104	.....	.....	38 00	19 00
"	101	101	101½	101	100	100½	.....	.....	.....	.....
"	101½	105	105½	106	106	105½	.....	.....	35 00	17 50
"	102	106	106	106½	105	104½	.....	.....	50 00	25 00
"	102½	105½	105	105½	105	104	.....	.....	32 00	16 00
"	102	104½	105	105	104½	104	.....	.....	40 00	20 00
Samuel Reynolds	101	101½	101	101	101½	101¾	.....	.....	.....	.....
"	101	100	101	101½	101	101½	.....	.....	.....	.....
"	100½	100	101¼	101	101¾	101½	.....	.....	.....	.....
"	101	101¾	100½	100¾	101	101¾	.....	.....	.....	.....
"	100	101	100½	101½	101¼	102	.....	.....	.....	.....
"	99	101¼	100	100	100¾	101¾	.....	.....	.....	.....
"	101	101	101½	102	102	101¾	.....	.....	.....	.....
"	99	101	101½	102	102	101¾	.....	.....	.....	.....
"	101	101	101½	102	101¾	102	.....	.....	.....	.....
"	101½	100	100	100½	101	101½	.....	.....	.....	.....
"	100½	100	101	101	100½	101½	.....	.....	.....	.....
"	100½	101	100½	101	101	101¼	.....	.....	.....	.....
"	101	101	100	101	100¾	101¾	.....	.....	.....	.....
"	101	102	101	101	101	102	.....	.....	.....	.....

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	Robt. D. Austin.....	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Good	"	Mammary, posterior and anterior mediastinal glands, lungs, liver.
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Mammary, anterior and posterior mediastinal, small intestines.
"	"	Mammary, anterior and posterior mediastinal glands, small intestines.
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
.....	M. J. Henderson.....	Retropharyngeal, mediastinal and pulmonary.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Pulmonary, mammæ and mediastinal.
.....	"	Pulmonary.
....	Robt. D. Austin	Small intestines; liver; posterior and anterior, mediastinal and mammary glands.
.....	"	Small intestines, mesenteric, liver, anterior and posterior mediastinal and mammary glands.
.....	"	.....
.....	"	Lungs, liver, small intestines, anterior and posterior mediastinal and mammary glands.
.....	"	Lungs, liver, small intestines, liver, small intestines, liver, anterior and posterior mediastinal.
.....	"	Small intestines, liver; large cyst in throat.
.....	"	Lungs, liver, small intestines, anterior and posterior, mediastinal and mammary.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 a. m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Otsego county:										
Samuel Reynolds	100	101	100½	100	100	101¾	.....	.....	.....	.....
"	102½	101	101¼	100½	100	101	.....	.....	.....	.....
"	100	102	101½	100½	101	101½	.....	.....	.....	.....
"	101	100½	101	100¼	100¾	101	.....	.....	.....	.....
Flynn & Seaver	10 ¼	101	101¼	101½	101	101	.....	.....	.....	.....
"	101½	101	101	101	101¼	101½	.....	.....	.....	.....
"	101½	104	105½	106½	106½	105½	.....	.....	$37 50	$18 75
"	101	101	101	102	102	101½	.....	.....	.....	.....
"	101	102½	104	106½	104	103¾	.....	.....	42 50	21 25
"	101	101	101½	101	101¾	101¼	.....	.....	.....	.....
"	101	101¼	101	101	101	101½	.....	.....	.....	.....
"	100½	101	101	100½	101½	100¾	.....	.....	.....	.....
"	101	101	101	101¾	101	101	.....	.....	.....	.....
H. L. Burnsides	101	101½	101½	101	101½	101¼	.....	.....	.....	.....
"	102	102	102	102	101½	101½	.....	.....	.....	.....
"	101½	101½	102	102	101½	102	.....	.....	.....	.....
"	102	101½	101¾	102	104	104½	.....	.....	46 00	23 00
"	101	101¼	101	101	101½	101	.....	.....	.....	.....
"	102	102	101½	102	101¾	101½	.....	.....	.....	.....
"	101½	101½	101½	101½	101	101½	.....	.....	.....	.....
"	102¼	101½	101¾	101	101	101	.....	.....	.....	.....
"	101¼	102	102	102	102¼	102	.....	.....	.....	.....
"	101½	101	101¼	101¼	101½	101½	.....	.....	.....	.....
"	101	101½	102¾	103	102	102	.....	.....	30 00	15 00
"	102	102	102	102	101½	101½	.....	.....	.....	.....
"	101	101½	104	103	102¼	101	.....	.....	38 00	19 00
"	101½	101¼	101¾	101½	101	101½	.....	.....	.....	.....
Riva Bostwick	101¾	101¾	102	102	102	102	.....	.....	.....	.....
"	100½	100½	101¼	101	101½	101½	.....	.....	.....	.....
"	100½	100	101	100¼	102	102	.....	.....	.....	.....
"	101¼	101¼	102	102	102	101½	.....	.....	.....	.....
	5 a. m.	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.				
Putnam county:										
H. Colwell	105½	105½	106	106½	105½	105	.....	.....	60 00	25 00
"	101¼	101	101½	101	101½	102	.....	.....	.....	.....
"	105¼	105	105¾	106	105	105	.....	.....	54 00	25 00
"	104½	106	107	107	106	105	.....	.....	50 00	25 00
"	102¼	102¼	102½	102¾	102	102	.....	.....	.....	.....
"	101½	101¼	101½	101	101½	102	.....	.....	.....	.....
"	101½	102½	102	101½	101	101	.....	.....	.....	.....
"	103½	104	105	106	106½	104	.....	.....	50 00	25 00
"	101½	105½	105¾	106	106	105	.....	.....	.....	.....
"	100¼	101½	100½	100	101	101	.....	.....	55 00	25 00
"	103½	105	105½	106	106	105	.....	.....	52 00	25 00
Byren Sutton	101	102	101½	101¾	102	102	.....	.....	.....	.....
"	102	101¾	102	102	102½	102	.....	.....	.....	.....
"	102	102	102¾	105	106	106	.....	.....	50 00	25 00
"	105½	106	106¼	105½	105	105	.....	.....	50 00	25 00
"	105½	106½	106½	106½	106	106	.....	.....	60 00	25 00
"	103	103	102½	102½	102½	102½	.....	.....	.....	.....
"	102	101½	101½	101½	101½	101	.....	.....	.....	.....
"	105	105½	106½	106	105¾	105	.....	.....	50 00	25 00
"	101¾	102¼	102	102	102	101¾	.....	.....	.....	.....
"	104	106	106¾	106¼	106	105¾	.....	.....	55 00	25 00
"	102	102	102	101¼	102	102	.....	.....	.....	.....
"	103	103	102½	102	103	103	.....	.....	.....	.....
"	102	102	101¼	102	101½	102½	.....	.....	.....	.....
"	105	106¾	106	105½	105	105	.....	.....	60 00	25 00
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Parker Bristol	104	107	106	105	104½	103	.....	.....	120 00	60 00

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	Robt. D. Austin.....	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mammæ, anterior and posterior mediastinal intestines, liver, lungs.
.....	"	.....
.....	"	Mammæ, posterior and anterior mediastinal liver, intestines.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Mammæ, anterior and posterior mediastinal intestines, liver very much so.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	Robert Austin.....	.....
.....	"	Mammæ, anterior and posterior mediastinal, small intestines.
.....	"	.....
.....	"	Mammary, anterior and posterior mediastinal, small intestines and liver.
.....	"	.....
Poor.....	"	.....
"	"	.....
"	"	.....
"	"	.....
Bad	John Faust.....	Right and left lung, anterior and posterior mediastinal, liver affected.
"	"	.....
"	"	Right and left lung, anterior and posterior mediastinal, in fact general tuberculosis.
"	"	Right and left lung, anterior and posterior mediastinal, liver affected.
"	"	.....
"	"	.....
"	"	.....
"	"	General tuberculosis.
"	"	General tuberculosis.
"	"	.....
"	"	Right and left lungs, anterior and posterior mediastinal, mammæ.
Good	"	.....
"	"	.....
"	"	General tuberculosis.
"	"	Right and left lungs, spleen and liver.
"	"	Right and left lung, liver, spleen, mammæ.
"	"	.....
"	"	.....
"	"	Retropharyngeal, right and left lung, liver mesenteries.
"	"	.....
"	"	Retropharyngeal, left lung very large.
"	"	.....
"	"	.....
"	"	.....
"	"	Right and left lungs, anterior and posterior mediastinal very large.
.....	Robt. D. Austin	Mammary, anterior and posterior mediastinal, lungs.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Putnam county:										
Parker Bristol..............	102	104½	106½	106	105	104	......	......	$120 00	$60 00
"	101½	103	103½	105	105	105	......	......	120 00	60 00
"	102	106	105½	104½	104	103	......	......	60 00	25 00
"	103	103	103	103¼	102¾	102	......	......	....	....
"	101	102½	102½	102¼	102½	102	......	......	....	....
"	101½	103	102	102½	101¾	102	......	......	....	....
"	102	105½	106½	106½	105½	104¼	......	......	40 00	20 00
	7 a. m	9 a. m.	11 a. m.	12 m.	1:30 p. m.					
Fremont K. Noble..........	101.4	101.2	101	101	101	......	......	......	....	....
"	101.2	101	101	101.2	101	......	......	......	....	....
"	100	101	100.4	101	101	......	......	......	....	....
"	101	101	101.2	101	100	......	......	......	....	....
"	100	100	100	99	100	......	......	......	....	....
"	101	101.4	101	101.2	101	......	......	......	....	....
"	100.4	99	99	100	100	......	......	......	....	....
"	101	100.8	100.8	100.4	100.6	......	......	......	....	....
"	100	100.2	100	100	101	......	......	......	....	....
"	100.4	99.6	100	101	101	......	......	......	....	....
"	101	100.8	101	101	101	......	......	......	....	....
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Schenectady county:										
David Smith................	103	101½	101	101	101	101½	......	......	....	....
"	101	101	101	101	101	101½	......	......	....	....
"	101	101	101	101½	102	102	......	......	....	....
"	101	101½	101½	101	101½	102	......	......	....	....
"	101½	101	101	101	101½	101½	......	......	....	....
"	101	101	101	101½	101½	101½	......	......	....	....
"	101½	101½	101½	101½	101½	102	......	......	....	....
"	100½	101	101	101	101	101¼	......	......	....	....
"	101	101	101	101	101	101½	......	......	....	....
"	101½	101½	101½	101½	101½	102	......	......	....	....
"	101	101½	101½	101	101	101¼	......	......	....	....
"	101	101	101½	101	101½	102	......	......	....	....
"	101	101	101	101	101	101¼	......	......	....	....
"	101	101¼	101	101	101	101½	......	......	....	....
J. W. Smitley	101	101	101¼	101¾	101½	101	......	......	....	....
"	101½	102	102	101½	101½	101	......	......	....	....
"	101½	102	102¼	102	101½	101½	......	......	....	....
"	101	101	101¾	101½	101½	101	......	......	....	....
"	102½	102	102¼	102	102	102	......	......	....	....
"	101	103½	101½	102¾	102	102	......	......	30 00	15 00
"	102½	102½	102½	101¾	101½	101½	......	......	....	....
"	102	102½	102	103	101½	101	......	......	....	....
"	102	102	102	102	101¾	102	......	......	....	....
"	102¼	102¾	103	103½	102¾	102	......	......	35 00	17 50
"	102	102	102	102	102	102	......	......	....	....
"	101½	101½	101½	101½	101¼	101½	......	......	....	....
"	102¾	103½	104	102¾	102	102	......	......	25 00	12 50
	7 a. m.	9 a. m.	11 a. m.	1 p. m.	3 p. m.					
Schuyler county:										
B. M. Wager................	101.6	101.3	102	100	100	......	......	......	....	....
"	101.4	102	101.4	100	100	......	......	......	....	....
"	102	102.4	102.2	102	102	......	......	......	....	....
"	101.6	102.2	102.6	102	102	......	......	......	....	....
"	102	102	103	102	101.8	......	......	......	....	....
"	101.2	103.6	102.8	101.8	101.8	......	......	......	....	....
"	100	102.4	103	101.8	101.8	......	......	......	....	....
"	101	100	102.6	102	101.2	......	......	......	....	....
"	102	102	103	102	102	......	......	......	....	....
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.					
Steuben county:										
H. Brown................	101.3	101	101.7	101.8	101.4	......	......	......	....	....
"	102.7	103.7	105.3	106.2	106	......	......	......	50 00	25 00
"	101.3	101.7	104.4	104.5	105.4	......	......	......	40 00	20 00

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
.....	Robt. D. Austin	Mesentery, mediastinal, liver, lungs.
.....	"	Mammary glands, small intestines.
.....	"	Mediastinal, small intestines, mesentery, lungs, liver.
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	Liver, small intestines mediastinal.
.....	M. J. Henderson	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	" .	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	R. D. Austin..	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Good.....	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Anterior and posterior mediastinal, liver, lungs.
"	"	.....
"	"	.....
"	"	.....
"	"	Anterior and posterior mediastinal, small intestines, mammæ glands.
"	"	.....
"	"	.....
"	"	Anterior and posterior mediastinal, liver, small intestines.
.....	M. J. Henderson	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
Excellent....	F. L. Kilborne.....	.....
"	"	Extensive lesions in posterior mediastinal glands only.
"	"	Small scattered foci throughout liver; hepatic, bronchial and mediastinal glands affected.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Steuben county:										
J. H. Brown	100.7	100.8	100.8	100.3	100.8	.....	.....	.....	.....	.....
"	100.8	100.8	104	103	102.8	.....	.....	.....	$50 00	$25 00
"	101.8	102	105	105	104	.....	.....	.....	50 00	25 00
"	101.5	101.4	101.4	101.7	101.4	.....	.....	.....	.....	.....
"	102.4	104.3	105.5	105.8	105	.....	.....	.....	45 60	22 50
"	105.5	105.8	105.3	105	104	.....	.....	.....	40 00	20 00
"	101	101.3	101.8	102.1	102.4	.....	.....	.....	.....	.....
"	101	102.8	105.2	105.1	105	.....	.....	.....	50 00	25 00
"	101.1	101.6	103.2	104.2	104.1	.....	.....	.....	50 00	25 00
"	101	101.2	101.5	101.3	101.2	.....	.....	.....	.....	.....
"	101.8	101.8	101.8	101.4	101.4	.....	.....	.....	.....	.....
Tioga county:										
G. M. Griswold	106	105	104.2	103.8	.....	.....	.....	.....	35 00	17 50
"	102.5	104	102.1	101.5	.....	.....	.....	.....	65 00	25 00
"	104	102.6	101.7	101.6	.....	.....	.....	.....	30 00	15 00
"	105	104.5	104.3	104	.....	.....	.....	.....	35 00	17 50
"	105.2	105.5	104.5	103.8	.....	.....	.....	.....	75 00	25 00
"	104.5	104	103.2	102.3	.....	.....	.....	.....	50 00	25 00
"	102.8	102.3	101.7	101	.....	.....	.....	.....	60 00	25 00
"	104	104	103	101.6	.....	.....	.....	.....	100 00	50 00
"	103.3	103.5	102	101.7	.....	.....	.....	.....	125 00	60 00
"	104.2	104.8	104.2	104.2	.....	.....	.....	.....	40 00	20 00
"	102.2	101.2	101.5	.....	.....	.....	.....	.....	.....	.....
"	101.2	101.2	101.2	.....	.....	.....	.....	.....	.....	.....
"	101.3	101.8	101.4	.....	.....	.....	.....	.....	.....	.....
Byron J. Jenks	102	106	106.2	105.8	.....	.....	.....	.....	40 00	20 00
"	103	103.2	103	102.6	.....	.....	.....	.....	50 00	25 00
"	101.8	103.4	103 3	100	.....	.....	.....	.....	55 00	25 00
"	105.5	106.6	106.4	105.4	.....	.....	.....	.....	45 00	22 50
"	104	105.6	105.6	104.8	.....	.....	.....	.....	45 00	22 50
"	101.8	101.8	101.8	101	.....	.....	.....	.....	.....	.....
"	103.8	104.3	104.4	103 3	.....	.....	.....	.....	40 00	20 00
"	102.5	102.8	105	104	.....	.....	.....	.....	150 00	60 00
"	101.2	101.8	102.2	101.5	.....	.....	.....	.....	.....	.....
"	108	107.6	107	104.5	.....	.....	.....	.....	50 00	25 00
"	104	105.1	103.6	102.2	.....	.....	.....	.....	40 00	20 00
"	104	106	106	104.5	.....	.....	.....	.....	155 00	60 00
"	105	106.1	105.4	103.8	.....	.....	.....	.....	35 00	17 50
"	101.7	101.8	101.6	101.2	.....	.....	.....	.....	.....	.....
"	104.7	106.5	105.8	105	.....	.....	.....	.....	38 00	19 00
"	102.2	105.3	105.6	103	.....	.....	.....	.....	55 00	25 00
"	106	106	106.4	105.4	.....	.....	.....	.....	35 00	17 50
"	102.5	105.7	105.8	105.4	.....	.....	.....	.....	125 00	25 00

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Excellent....	F. L. Kilborne.....	.....
"	"	Several foci grown size of hemp seed to that of peas in both glands of udder, apparently a tubeculous growth ½ in. across; loosely attached to peritoneum of jejunum; no other lesions to be found.
"	"	Anterior mediastinal and gland at root right bronchial much enlarged; tuberculous area 2 in. across, near center caudal lobe left lung.
"	"	.....
"	"	General in bronchial; mediastinal and left gland of udder; area 1 in. across in azygos lobe, and smaller area in left ventral.
"	"	Gland size hen's egg root each bronchial; tuberculous area near lower ventral lobe left lung; one fucus in gland of udder.
"	"	.....
"	"	Left retropharyngeal gland size goose egg, and tuberculosis throughout; no other lesions to be found.
"	"	Both glands of udder enlarged 3 to 4 times with several tuberculous foci size hemp seed and larger scattered throughout gland on section.
"	"	.....
"	"	.....
Poor.....	"	General glandular and slight pulmonary tuberculosis.
"	"	General glandular and slight pulmonary tuberculosis.
"	"	General tuberculosis.
"	"	General pulmonary tuberculosis.
"	"	General tuberculosis.
"	"	General tuberculosis.
"	"	Extensive tuberculosis in both lungs, also right retropharyngeal several thoracic glands.
"	"	Slight pulmonary tuberculosis, extensive glandular, including one udder gland.
"	"	General tuberculosis.
"	"	General glandular, slight pulmonary tuberculosis.
"	"	.....
"	"	.....
"	"	.....
Fair	"	Right retropharyngeal, caudal mediastinal, two bronchial and one mesentery gland tuberculosis, each having few foci.
"	"	Extensive pulmonary tuberculosis also glandular.
"	"	A cephalic mediastinal gland tuberculous one bronchial ½ in.—2 in. no other lesions.
"	"	Extensive glandular, pulmonary tuberculosis.
"	"	Two small tuberculosis foci in both retropharyngeals, two mediastinals and one bronchial gland.
"	"	.....
"	"	Extensive pulmonary tuberculosis one small foci in liver.
"	"	Right retropharyngeal, mediastinal, bronchial glands, one focus near border caudal lobe left lung.
"	"	.....
"	"	Extensive glandular and pulmonary tuberculosis.
"	"	Several tuberculosis centers scattered through both lungs.
"	"	One retropharyngeal softening throughout, several small foci in mediastinal glands.
"	"	General tuberculosis.
"	"	.....
"	"	Pharyngeal, mediastinal bronchial glands tuberculosis, two center in caudal lobe left lung.
"	"	Several foci in caudal posterior mediastinal gland, no other infection.
"	"	Bronchial and mediastinal glands tuberculosis, three centers in caudal lobe right lung and one left from 1 to 1¼ in. in diameter.
"	"	Thoracic and hepatic glands tuberculosis, large number foci in liver about hilus, numerous recent centers scattered throughout lungs.

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Tioga county:										
Byron J. Jenks	100.6	102.4	104.2	104.5	.....	.....	.....	.....	$55 00	$25 00
					2 p. m.					
"	103	104	104.5	102.8	.....	.....	.....	.....	100 00	25 00
"	101	101	100.7	100	.....	.....	.....	.....	.....	.....
"	102.8	104	104.9	104.5	.....	.....	.....	.....	65 00	25 00
"	105	105.8	104.5	104.5	.....	.....	.....	.....	25 00	12 50
"	106.8	106.2	105	103	.....	.....	.....	.....	30 00	15 00
"	103.6	103.2	103.2	102.5	101.9	.....	.....	.....	45 00	22 50
"	102	101.4	101.5	101	.....	.....	.....	.....	.....	.....
"	101.4	101	100.8	101	.....	.....	.....	.....	.....	.....
"	104.8	104.7	104.8	103.8	.....	.....	.....	.....	130 00	25 00
"	102	102.4	102.2	103	.....	.....	.....	.....	.....	.....
*	104	102.5	102.8	101.8	.....	.....	.....	.....	30 00	15 00
"	101.6	101.4	101.4	101.3	.....	.....	.....	.....	.....	.....
"	102	101.8	102.6	103.2	.....	.....	.....	.....	.....	.....
						4 p. m.				
Lorenzo N. De Groot	100.8	101.6	101.8	101.7	101	101.2	.....	.....	.....	.....
"	101.6	102	102	102	101.4	101.6	.....	.....	.....	.....
"	101	101.3	103.9	105	105	104.2	.....	.....	45 00	22 50
"	102	102	101.8	102	101.6	101.8	.....	.....	.....	.....
"	101.3	102.7	104.7	106	104.8	104	.....	.....	50 00	25 00
"	101.5	102	103	103	102.4	102	.....	.....	.....	.....
"	101.7	102.7	104.7	105.2	105	103.5	.....	.....	38 00	19 00
"	102	103.2	102.4	102.2	102.3	102.6	.....	.....	.....	.....
"	101.7	103.5	104.7	106.4	105	104.2	.....	.....	35 00	17 50
"	102	102.1	102.6	102.1	101.8	102	.....	.....	.....	.....
"	101.4	101.7	102.4	103	103	102	.....	.....	.....	.....
"	102	102.2	103	103.1	103.2	103	.....	.....	.....	.....
"	102.3	102.4	103.3	104	104.8	104.6	.....	.....	45 00	22 50
"	101.5	101.8	101.7	101.3	102	102	.....	.....	.....	.....
"	101	101.2	101.5	101.2	101.4	101.3	.....	.....	.....	.....
"	102.2	102.5	102.6	102.7	102.3	102.2	.....	.....	.....	.....
"	101.2	102.7	104.3	104.8	104	102.6	.....	.....	18 00	9 00
"	101	101.2	102	101.8	102	101.8	.....	.....	.....	.....
"	101.2	101.7	102	101.7	101.6	101.4	.....	.....	.....	.....
"	101.6	102.6	101.4	101.3	101.5	102	.....	.....	.....	.....
	8 a. m.	10 a. m.	12 m.	2 p. m.						
W. W. Thomas	101.6	101.6	101.4	101.4	.....	.....	.....	.....	.....	.....
"	101	101	101.4	101.4	.....	.....	.....	.....	.....	.....
"	101	101	101.2	101	.....	.....	.....	.....	.....	.....
"	100	100	100.4	100	.....	.....	.....	.....	.....	.....
"	101	101.4	101.4	101.6	.....	.....	.....	.....	.....	.....
"	101	101.4	101	101.4	.....	.....	.....	.....	.....	.....
"	101.4	101	101	101	.....	.....	.....	.....	.....	.....
"	101.4	101	101.4	101	.....	.....	.....	.....	.....	.....
"	101.4	101.6	101	101	.....	.....	.....	.....	.....	.....
"	101.6	101.4	101	101.4	.....	.....	.....	.....	.....	.....
"	102.6	102.6	102	102	.....	.....	.....	.....	.....	.....
"	101	101	100	100	.....	.....	.....	.....	.....	.....
"	101.4	101	101.6	101.4	.....	.....	.....	.....	.....	.....
"	101.8	101.4	101.6	101.8	.....	.....	.....	.....	.....	.....
"	101	101	100	100	.....	.....	.....	.....	.....	.....
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.				
Ulster county:										
G. Van B. Roberts	100¼	100	100¼	100½	101	101	.....	.....	.....	.....
"	101½	101	101½	101	101	101¼	.....	.....	.....	.....
"	99½	100	101	101	100¼	100	.....	.....	.....	.....
"	100½	101	101¼	101¼	101	101	.....	.....	.....	.....

* No tuberculin reaction diag-

mortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Fair.....	F. L. Kilborne.....	A single mesenteric gland enlarged to twice its normal size and containing three foci ⅛ in. to ⅜ in. in diameter.
"	"	General pulmonary tuberculosis.
"	"	.....
"	"	Numerous foci in posterior mediastinal glands only.
"	"	General pulmonary tuberculosis.
"	"	General pulmonary and hepatic tuberculosis.
"	"	General tuberculosis.
"	"	.....
"	"	.....
"	"	Extensive pulmonary tuberculosis.
"	"	.....
"	"	General tuberculosis.
"	"	.....
"	"	.....
Good	"	.....
"	"	.....
"	"	One mediastinal and bronchial glands, enlarged, each containing several foci size of peas.
"	"	.....
"	"	Four mediastinal glands, enlarged.
"	"	.....
"	"	One mediastinal gland, 1 1-2 in. x 2 1-2 in. x 5 in., with numerous caseous foci; also one focus 1 in. in diameter, near center dorsal border, caudal lobe, right lung, with several caseous centers.
"	"	.....
"	"	Two mediastinal glands, enlarged about three times and on section indurated by recent tuberculosis infiltration
"	"	.....
"	"	.....
"	"	.....
"	"	Gen-ral tuberculosis, very extensive.
"	"	.....
"	"	.....
"	"	.....
"	"	One mediastinal and left bronchial gland, each with four or five caseous foci size of peas. One recent center ¾ in. diam. near center caudal lobe left lung.
"	"	.....
"	"	.....
"	"	.....
.....	M. J. Henderson, V. S.	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
.....	John Faust.....	.....
.....	"	.....
.....	"	.....
.....	"	.....

nosis by physical examination.

Table of Tuberculin Tests, Post-

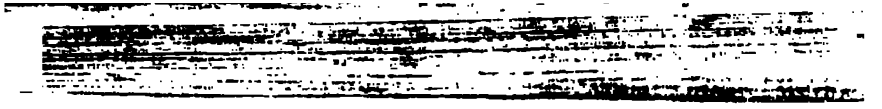
OWNER.	Temperature After Injection.								Appraisement	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Ulster county:										
G. Van B. Roberts	100⅜	101¼	101¼	101¼	101	101¼				
"	102¼	102¼	102¼	101¾	101¾	101¼				
"	102	102¼	103	103	102½	102¼				
"	101	100½	100½	101¼	100½	101				
"	101¼	101½	101½	101½	100½	101				
"	100	101	101	101½	100½	101¼				
"	101	1.01½	100½	101½	100½	101				
							Dec. 7.			
Warren county:	7	9	11	1	3	7	10	2		
Alma Farm, Theo. F. H.	a. m.	a. m.	a. m.	p. m.	p. m.	p. m.	a. m.	p. m.		
Meyer, manager	104.6	105.8	104.2	104	103.6	103	102.6		$80 00	
"	102	103.1	102.8	102.1	102.5	102.2	102			
"	104.2	105.2	104.5	104.6	104.5	103	101.8		80 00	
"	101.5	102.4	102.3	104	105	103	101.2	102	120 00	
"	104	104.8	105	104.5	104.8	104.3	102.8		100 00	
"	104.5	105.8	105.1	105.8	105.3	103.8	101.3		110 00	
"	102.4	102.3	102.4	102.4	102.3	102.3	101.3			
"	102.2	103.4	104.1	105.3	106.3	105.5	102.2		90 00	
"	102	102.8	103	103.2	104	101.8	101.2	101.8	80 00	
"	101.6	102	103	103	102	101.5	101	101	80 00	
"	103	103.4	104.2	104	103.7	102	102.4		50 00	
"	101.2	102	102.5	103	103.8	102.5	101.2	102	90 00	
"	102	102.8	103.4	104	104	103	100.6		50 00	
"	101	101.6	102	102	102	102	102			
"	101	101.6	102.1	102.8	103.2	101	100.2			
"	102.5	102.3	102.6	102.5	102.5	102	101.2			
"	103.8	105	106	106.2	106	104.5	101.8		60 00	
"	103.8	105	106	106	105.5	105	102.6		80 00	
"	101.7	102.2	102.4	102.3	102.3	101.2	102			
"	102	102.2	102.2	102	103	101.7	101			
"	103.4	104.3	105	105.3	105.5	105	102.8		50 00	
"	102.4	104	104.5	103.8	104	104	101.6		100 00	
"	102.6	102.8	103.2	102.8	103.8	101.5	103	103		
"	102.5	103.4	104.5	103.6	103.1	102.2	101.5		120 00	
"	102.4	103	103.5	104.2	104.8	103	102		120 00	
"	101	102.3	101.6	102						
"	100	101	101.6	102.1						
"	100	101	101.7	101.4						
"	101	101.3	101.5	101.6						
"	100	101.4	102	102.5						
"	100	101.2	101.2	101.1						
"	102.4	102.3	102.6	102						
"	102.8	102.6	102.9	102						
"	105	104	104	103.2					15 00	
"	103	102.3	102.5	102.4						
"	104	104.8	103.5	103.1					120 00	
"	102.5	104	103.8	103.2					120 00	
"	104	103	103	102					30 00	
"	101.3	102	102	101.8						
"	100.8	101.6	101.8	101.8						
"	101	101.6	101.6	101.7						
"	106	104.8	103.5	103.4					30 00	
"	101	101.2	102	101.5						
									Total	
"	102.4	103.2	103	102.8					499 50	

ıortems, Appraisals and Awards—(*Continued*).

Condition.	Inspector.	Post-mortem.— Location of Lesions.
....	John Faust.....	.....
.....	"	.....
.....	"	.....
... .	"	.....
.....	"	.....
.....	"	.....
.....	"	.....
ıor.....	F. L. Kilborne.....	General thoracic tuberculosis; also retropharyngeal glands.
"	"	.....
"	"	Caudal half of right caudal lobe entirely tuberculous; two small centers in spleen, retropharyngeal, thoracic and hepatic glands.
"	"	General thoracic and abdominal tuberculosis.
"	"	Mediastinal glands: one center dorsal border left caudal lobe.
"	"	General pulmonary tuberculosis.
"	"	.....
"	"	General pulmonary tuberculosis.
"	"	General tuberculosis.
"	"	Mediastinal glands; one center near center left caudal lobe.
"	"	General thoracic tuberculosis.
"	"	Tuberculous centers ¼ to 6 in. in caudal half of caudal lobe; no glandular affection noted.
"	"	Thoracic generally; caudal lobe right lung entirely tuberculous.
"	"	.....
"	"	.....
"	"	.....
"	"	Retropharyngeal and thoracic glands and general pulmonary tuberculosis.
"	"	Thoracic glands; several foci in left lung and few small areas in cephalic lobe, right lung.
"	"	.....
"	"	.....
"	"	Thoracic and hepatic gland, with general pulmonary tuberculosis.
"	"	Bronchial glands; one center on ectal surface near center left caudal lobe.
"	"	.....
"	"	Mediastinal glands only; quite extensive caseous deposits.
"	"	Mediastinal glands only; quite extensive caseous deposits; also gland at root right bronchial.
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	.....
"	"	Pharyngeal glands, several recent small caseous foci in each; few small foci in liver.
"	"	.....
"	"	Mediastinal and hepatic glands; one center near middle left caudal lobe.
"	"	Few small foci in two mediastinal glands only.
"	"	Acute tuberculosis; infiltration several mesenteric glands; one small focus in liver.
"	"	.....
"	"	.....
"	"	.....
"	"	Extensive pulmonary tuberculosis.
"	"	.....
"	"	.....

Table of Tuberculin Tests, Post-

OWNER.	Temperature After Injection.								Appraisement.	Award.
	6 a. m.	8 a. m.	10 a. m.	12 m.	2 p. m.	4 p. m.	6 p. m.	8 p. m.		
Wayne county:										
Wm. H. Lookup	101.4	102	102	101.8	.....	.....	.....	.....	.....	.....
"	102	102	102	101.8	.....	.....	.....	.....	.....	.....
"	101.4	102.4	102.4	102	.....	.....	.....	.....	.....	.....
"	101.7	101.8	101.8	101.4	.....	.....	.....	.....	.....	.....
"	102	102.7	102.8	102.9	.....	.....	.....	.....	.....	.....
					2 p. m.	4 p. m.				
Westchester county:										
Leverett W. Baker	102¼	104½	106	105½	105	104	.....	.....	$60 00	$25 00
"	104¼	106½	106	104½	104	104	.....	.....	45 00	22 50
"	102	102¼	102	103¼	103	102¾	.....	.....	.....	.....
"	104½	106½	106½	105½	105	105	.....	.....	50 00	25 00
"	102½	103	104	104½	103⅝	103	.....	.....	.....	.....
"	103¾	104	105	104⅞	104	103½	.....	.....	50 00	25 00
"	100¾	101¼	102	104½	104½	104	.....	.....	.....	.....
"	102½	103¼	104	105½	105	105	.....	.....	45 00	22 50
"	103½	105	105¾	105	105½	105	.....	.....	45 00	22 50
"	99¾	101	102¾	104¾	101¾	101	.....	.....	.....	.....
"	102¾	102	102	101¼	101½	102	.....	.....	.....	.....
"	101	101¼	101¼	102¼	102	102¼	.....	.....	.....	.....
"	103¼	105¾	106½	106	106	105	.....	.....	50 00	25 00
"	102½	102¼	102¾	102½	102½	102	.....	.....	.....	.....
"	102	104	105¾	105½	105	105	.....	.....	60 00	25 00
"	105¼	105¼	106¾	106½	106	105	.....	.....	45 00	22 50
"	100¾	100	101½	101	101	101½	.....	.....	.....	.....
"	102	103¾	102½	103	103	102½	.....	.....	.....	.....
"	104	105¼	106	105	105	104½	.....	.....	40 00	20 00
"	101¼	101	101½	101½	101	101½	.....	.....	.....	.....
"	105½	105½	104	105	105	106	.....	.....	50 00	25 00
"	101½	101	102½	104¾	101	102	.....	.....	.....	.....
"	100½	100	100¾	100	101	101	.....	.....	.....	.....
"	102	104¾	105¾	105	105	104	.....	.....	45 00	22 50
"	102	101¾	101¾	101½	102	102	.....	.....	.....	.....
"	100½	101½	101¾	101½	101	101	.....	.....	.....	.....

mortems, Appraisals and Awards.—(*Concluded*).

Condition.	Inspector.	Post-mortem.—Location of Lesions.
Healthy	F. L. Kilborne	
"	"	
"	"	
"	"	
"	"	
	John Faust	Both lungs, liver and mammæ.
	"	Spleen, liver and mammæ.
	"	
	"	Both lungs, extensive on ribs, liver.
	"	
	"	Anterior and posterior mediastinal, both lungs extensively.
	"	
	"	Anterior and posterior mediastinal, both lungs and heart.
	"	Both lungs, liver and mesenteries.
	"	
	"	
	"	
	"	Anterior and posterior mediastinal, both lungs.
	"	
	"	Anterior and posterior mediastinal, liver.
	"	Anterior and posterior mediastinal, left lung, mammæ.
	"	
	"	
	"	General tuberculosis.
	"	
	"	Anterior and posterior mediastinal, both lungs, liver very bad.
	"	
	"	
	"	Left lung, spleen, mesenteries, mammæ.
	"	
	"